suspension cancers, such as, leukemia, cells that lymphoma, melanoma, glioma stimulated. (e.g., malignant glioma), solid tumors, and prostate, breast,	lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other	preferred indications include benign dysproliferative disorders and pre-neoplastic	conditions, such as, for example, hyperplasia,	metaplasta, and/or dysplasta. Preferred indications include	anemia, pancytopenia, leukopenia, thrombocytopenia,	Hodgkin's disease, acute [vmnhocvtic anemia (ALL).	plasmacytomas, multiple	myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous	disease, inflammatory bowel	disease, neutropenia, neutrophilia, psoriasis,	suppression of immune reactions to transplanted	organs and tissues,	hemophilia, hypercoagulation,	diabetes mellitus, endocarditis,	meningitis, Lyme Disease,
cell line, which is a suspension culture of leukemia cells that produce IL-2 when stimulated.															

					asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
411	HOEBK34	1359	Production of MCP-1	MCP-1 FMAT. Assays for immunomodulatory proteins that are produced by a large variety of cells and act to	A highly preferred embodiment of the invention includes a method for stimulating (e.g. increasing)
				induce chemotaxis and activation of monocytes and T cells are well known in the art and may be used or routinely	MCP-1 production. An alternative highly preferred embodiment of the invention includes a method for
				modified to assess the ability of polypeptides of the invention (including antibodies	inhibiting (e.g., reducing) MCP-1 production. A highly preferred indication is
				the invention) to mediate immunomodulation, induce chemotaxis, and modulate immune cell activation.	disease as described below under "Infectious Disease"). Additional highly preferred indications include
				immunomodulatory proteins evaluate the production of cell surface markers, such as monocyte chemoattractant	inflammatory disorders. Preferred indications include blood disorders (e.g., as described below under "Immine Activity" "Rlood.
				activation of monocytes and T cells. Such assays that may be used or routinely modified to test immunomodulatory and	Related Disorders", and/or "Cardiovascular Disorders"). Highly preferred indications include autoimmune diseases

	diffferentiation activity of	(e.g., rheumatoid arthritis,
	polypeptides of the invention	systemic lupus erythematosis,
	(including antibodies and	multiple sclerosis and/or as
	agonists or antagonists of the	described below) and
	invention) include assays	immunodeficiencies (e.g., as
	disclosed in Miraglia et al., J	described below). Preferred
	Biomolecular Screening 4:193-	indications also include
	204(1999); Rowland et al.,	anemia, pancytopenia,
	"Lymphocytes: a practical	leukopenia, thrombocytopenia,
	approach" Chapter 6:138-160	Hodgkin's disease, acute
	(2000); Satthaporn and	lymphocytic anemia (ALL),
	Eremin, J R Coll Surg Ednb	plasmacytomas, multiple
-	45(1):9-19 (2001); and	myeloma, Burkitt's lymphoma,
	Verhasselt et al., J Immunol	arthritis, AIDS, granulomatous
	158:2919-2925 (1997), the	disease, inflammatory bowel
	contents of each of which are	disease, sepsis, neutropenia,
	herein incorporated by	neutrophilia, psoriasis,
-	reference in its entirety.	suppression of immune
	Human dendritic cells that may	reactions to transplanted
	be used according to these	organs and tissues,
	assays may be isolated using	hemophilia, hypercoagulation,
	techniques disclosed herein or	diabetes mellitus, endocarditis,
	otherwise known in the art.	meningitis (bacterial and
	Human dendritic cells are	viral), Lyme Disease, asthma,
	antigen presenting cells in	and allergy Preferred
	suspension culture, which,	indications also include
	when activated by antigen	neoplastic diseases (e.g.,
	and/or cytokines, initiate and	leukemia, lymphoma, and/or as
	upregulate T cell proliferation	described below under
	and functional activities.	"Hyperproliferative
		Disorders"). Highly preferred

HOEBK34 HOEBK34 HOEBK34	1359 1359 1359 1360	CD152 in Human T cells Caspase (+paclitaxel) in SW480 IL-8 in SW480 Inhibition of squalene synthetase gene transcription.	Reporter Assay: construct contains regulatory and coding sequence of squalene synthetase, the first specific enzyme in the cholesterol	indications include neoplasms and cancers, such as, leukemia, lymphoma, prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia.
			biosynthetic pathway. See Jiang, et al., J. Biol. Chem. 268:12818-128241(993), the contents of which are herein incorporated by reference in its entirety. Cells were treated with SID supernatants, and	

SEAP activity was measured after 72 hours. HepG2 is a human hepatocellular carcinoma cell line (ATCC HB-8065). See Knowles et al., Science. 209:497-9 (1980), the contents of which are herein incorporated by reference in its entirety.	Assays for the regulation (i.e. increases or decreases) of viability and proliferation of cells in vitro are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate viability and proliferation of pre-adipose cells and cell lines. For example, the CellTiter-Gloô Luminescent Cell Viability Assay (Promega Corp., Madison, WI, USA) can be used to measure the number of viable cells in culture based on quantitation of the ATP present which signals the presente of metabolically
SE after a flux car car HB HB Sci cor cor inc ent	Proliferation of preadipose cells (such as 3T3-L1 cells) cel the rough the ant
	1360
	HOEBZ89
	2505

				active cells. 313-L1 is a mouse preadipocyte cell line. It is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation. Cells were differentiated to an adipose-like state before being used in the screen. See Green H and Meuth M., Cell 3: 127-133 (1974), which is herein incorporated by reference in its entirety.	
412	HOEBZ89	1360	VEGF in HT1080		
412	HOEBZ89	1360	IgG in Human B cells SAC		
412	HOEBZ89	1360	Production of IFNgamma using a T cells	IFNgamma FMAT. IFNg plays a central role in the immune system and is considered to be a proinflammatory cytokine. IFNg promotes TH1 and inhibits TH2 differentiation; promotes IgG2a and inhibits IgE secretion; induces macrophage activation; and increases MHC expression. Assays for immunomodulatory proteins produced by T cells and NK cells that regulate a variety of inflammatory	A highly preferred embodiment of the invention includes a method for stimulating the production of IFNg. An alternative highly preferred embodiment of the invention includes a method for inhibiting the production of IFNg. Highly preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or

helper cell functions are well	and infection (e.g., viral
known in the art and may be	infections, tuberculosis,
used or routinely modified to	infections associated with
assess the ability of	chronic granulomatosus
polypeptides of the invention	disease and malignant
antibodies and	osteoporosis, and/or as
agonists or antagonists of the	described below under
invention) to mediate	"Infectious Disease"). Highly
immunomodulation, regulate	preferred indications include
inflammatory activities,	autoimmune disease (e.g.,
modulate TH2 helper cell	rheumatoid arthritis, systemic
function, and/or mediate	lupus erythematosis, multiple
humoral or cell-mediated	sclerosis and/or as described
immunity. Exemplary assays	below), immunodeficiency
that test for	(e.g., as described below),
immunomodulatory proteins	boosting a T cell-mediated
evaluate the production of	immune response, and
cytokines, such as Interferon	suppressing a T cell-mediated
gamma (IFNg), and the	immune response. Additional
activation of T cells. Such	highly preferred indications
assays that may be used or	include inflammation and
routinely modified to test	inflammatory disorders.
immunomodulatory activity of	Additional preferred
es of the invention	indications include idiopathic
antibodies and	pulmonary fibrosis. Highly
agonists or antagonists of the	preferred indications include
invention) include the assays	neoplastic diseases (e.g.,
disclosed in Miraglia et al., J	leukemia, lymphoma,
Biomolecular Screening 4:193-	melanoma, and/or as described
204 (1999); Rowland et al.,	below under
"Lymphocytes: a practical	"Hyperproliferative
	helper cell functions are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate inflammatory activities, modulate TH2 helper cell function, and/or mediate humoral or cell-mediated immunity. Exemplary assays that test for immunity. Exemplary proteins evaluate the production of cytokines, such as Interferon gamma (IFNg), and the activation of T cells. Such assays that may be used or routinely modified to test immunomodulatory activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Miraglia et al., J Biomolecular Screening 4:193-204 (1999); Rowland et al., "Lymphocytes: a practical

	approach" Chapter 6:138-160	Disorders"). Highly preferred
	 (2000); Gonzalez et al., J Clin	indications include neoplasms
	Lab Anal 8(5):225-233 (1995);	and cancers, such as, for
	Billiau et al., Ann NY Acad	example, leukemia, lymphoma,
	Sci 856:22-32 (1998); Boehm	melanoma, and prostate,
	et al., Annu Rev Immunol	breast, lung, colon, pancreatic,
	15:749-795 (1997), and	esophageal, stomach, brain,
	 Rheumatology (Oxford)	liver and urinary cancer. Other
	38(3):214-20 (1999), the	preferred indications include
	contents of each of which are	benign dysproliferative
	herein incorporated by	disorders and pre-neoplastic
	reference in its entirety.	conditions, such as, for
	 Human T cells that may be	example, hyperplasia,
	 used according to these assays	metaplasia, and/or dysplasia.
	may be isolated using	Preferred indications include
-	techniques disclosed herein or	anemia, pancytopenia,
	otherwise known in the art.	leukopenia, thrombocytopenia,
	Human T cells are primary	Hodgkin's disease, acute
	human lymphocytes that	lymphocytic anemia (ALL),
	mature in the thymus and	plasmacytomas, multiple
	express a T Cell receptor and	myeloma, Burkitt's lymphoma,
	CD3, CD4, or CD8. These	arthritis, AIDS, granulomatous
	 cells mediate humoral or cell-	disease, inflammatory bowel
	mediated immunity and may	disease, sepsis, neutropenia,
	be preactivated to enhance	neutrophilia, psoriasis,
	 responsiveness to	suppression of immune
	immunomodulatory factors.	reactions to transplanted
		organs and tissues,
		hemophilia, hypercoagulation,
		diabetes mellitus, endocarditis,
		meningitis, Lyme Disease,

					asthma and allergy.
	HOEBZ89	1360	Production of IL-4	IL-4 FMAT. Assays for	A highly preferred
412				immunomodulatory proteins	embodiment of the invention
				secreted by TH2 cells that	includes a method for
				stimulate B cells, T cells,	stimulating (e.g., increasing)
				macrophages and mast cells	IL-4 production. An alternative
				and promote polarization of	highly preferred embodiment
				CD4+ cells into TH2 cells are	of the invention includes a
				well known in the art and may	method for inhibiting (e.g.,
				be used or routinely modified	reducing) IL-4 production.
				to assess the ability of	A highly preferred indication
				polypeptides of the invention	includes asthma. A highly
				(including antibodies and	preferred indication includes
				agonists or antagonists of the	allergy. A highly preferred
				invention) to mediate	indication includes rhinitis.
				immunomodulation, stimulate	Additional highly preferred
				immune cells, modulate	indications include
				immune cell polarization,	inflammation and
				and/or mediate humoral or	inflammatory disorders.
				cell-mediated immunity.	Highly preferred indications
				Exemplary assays that test for	include neoplastic diseases
				immunomodulatory proteins	(e.g., leukemia, lymphoma,
				evaluate the production of	melanoma, and/or as described
				cytokines, such as IL-4, and	below under
				the stimulation of immune	"Hyperproliferative
				cells, such as B cells, T cells,	Disorders"). Preferred
				macrophages and mast cells.	indications include neoplasms
				Such assays that may be used	and cancers, such as, for
				or routinely modified to test	example, leukemia, lymphoma,
				immunomodulatory activity of	melanoma, and prostate,
				polypeptides of the invention	breast, lung, colon, pancreatic,

	(including antibodies and	esophageal, stomach, brain,
	agonists or antagonists of the	liver and urinary cancer. Other
	 invention) include the assays	preferred indications include
	 disclosed in Miraglia et al., J	benign dysproliferative
-	 Biomolecular Screening 4:193-	disorders and pre-neoplastic
	 204 (1999); Rowland et al.,	conditions, such as, for
	"Lymphocytes: a practical	example, hyperplasia,
	approach" Chapter 6:138-160	metaplasia, and/or dysplasia.
	 (2000); Gonzalez et al., J Clin	Preferred indications include
	Lab Anal 8(5):277-283 (1194);	blood disorders (e.g., as
	Yssel et al., Res Immunol	described below under
	 144(8):610-616 (1993); Bagley	"Immune Activity", "Blood-
	 et al., Nat Immunol 1(3):257-	Related Disorders", and/or
	261 (2000); and van der Graaff	"Cardiovascular Disorders").
	et al., Rheumatology (Oxford)	Preferred indications include
-	 38(3):214-220 (1999), the	autoimmune diseases (e.g.,
	contents of each of which are	rheumatoid arthritis, systemic
	herein incorporated by	lupus erythematosis, multiple
	 reference in its entirety.	sclerosis and/or as described
	Human T cells that may be	below) and
	used according to these assays	immunodeficiencies (e.g., as
	 may be isolated using	described below). Preferred
	 techniques disclosed herein or	indications include anemia,
	otherwise known in the art.	pancytopenia, leukopenia,
	 Human T cells are primary	thrombocytopenia, Hodgkin's
	human lymphocytes that	disease, acute lymphocytic
	mature in the thymus and	anemia (ALL),
	express a T cell receptor and	plasmacytomas, multiple
	CD3, CD4, or CD8. These	myeloma, Burkitt's lymphoma,
	cells mediate humoral or cell-	arthritis, AIDS, granulomatous
	mediated immunity and may	disease, inflammatory bowel

				be preactivated to enhance responsiveness to immunomodulatory factors.	disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additonal preferred indication is infection (e.g., an infectious disease as described below under "Infectious
412	HOEBZ89	1360	IL-6 in HUVEC		
413	НОЕDB32	1361	Production of MIP1alpha	MIP-1alpha FMAT. Assays for immunomodulatory proteins produced by activated dendritic cells that upregulate monocyte/macrophage and T cell chemotaxis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate immunomodulation, modulate chemotaxis, and modulate T cell differentiation. Exemplary	A highly preferred embodiment of the invention includes a method for stimulating MIP1a production. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) MIP1a production. A highly preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease"). Preferred indications include blood disorders (e.g., as described below under

	assays that test for	"Immune Activity", "Blood-
	immunomodulatory proteins	Related Disorders", and/or
	evaluate the production of	"Cardiovascular Disorders").
	chemokines, such as	Highly preferred indications
	macrophage inflammatory	include autoimmune diseases
	protein 1 alpha (MIP-1a), and	(e.g., rheumatoid arthritis,
	the activation of	systemic lupus erythematosis,
	monocytes/macrophages and T	multiple sclerosis and/or as
	cells. Such assays that may be	described below) and
	used or routinely modified to	immunodeficiencies (e.g., as
	test immunomodulatory and	described below). Additional
	chemotaxis activity of	highly preferred indications
	polypeptides of the invention	include inflammation and
	(including antibodies and	inflammatory disorders.
	agonists or antagonists of the	Preferred indications also
	invention) include assays	include anemia, pancytopenia,
	disclosed in Miraglia et al., J	leukopenia, thrombocytopenia,
	Biomolecular Screening 4:193-	Hodgkin's disease, acute
	204(1999); Rowland et al.,	lymphocytic anemia (ALL),
	"Lymphocytes: a practical	plasmacytomas, multiple
	approach" Chapter 6:138-160	myeloma, Burkitt's lymphoma,
	(2000); Satthaporn and	arthritis, AIDS, granulomatous
	Eremin, J R Coll Surg Ednb	disease, inflammatory bowel
	45(1):9-19 (2001); Drakes et	disease, sepsis, neutropenia,
	al., Transp Immunol 8(1):17-	neutrophilia, psoriasis,
-	29 (2000); Verhasselt et al., J	suppression of immune
	Immunol 158:2919-2925	reactions to transplanted
-	(1997); and Nardelli et al., J	organs and tissues, hemophilia,
	Leukoc Biol 65:822-828	hypercoagulation, diabetes
	(1999), the contents of each of	mellitus, endocarditis,
	which are herein incorporated	meningitis, Lyme Disease,

				by reference in its entirety.	asthma, and allergy.
				Human dendritic cells that may	Preferred indications also
				be used according to these	include neoplastic diseases
				assays may be isolated using	(e.g., leukemia, lymphoma,
				techniques disclosed herein or	and/or as described below
				otherwise known in the art.	under "Hyperproliferative
				Human dendritic cells are	Disorders"). Highly preferred
				antigen presenting cells in	indications include neoplasms
				suspension culture, which,	and cancers, such as, leukemia,
		•		when activated by antigen	lymphoma, prostate, breast,
				and/or cytokines, initiate and	lung, colon, pancreatic,
				upregulate T cell proliferation	esophageal, stomach, brain,
				and functional activities.	liver, and urinary cancer. Other
					preferred indications include
					benign dysproliferative
					disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
	HOEDB32	1361	Production of TNF	TNFa FMAT. Assays for	A highly preferred
413			alpha by dendritic	immunomodulatory proteins	embodiment of the invention
			cells	produced by activated	includes a method for
				macrophages, T cells,	inhibiting (e.g., decreasing)
				fibroblasts, smooth muscle,	TNF alpha production. An
				and other cell types that exert a	alternative highly preferred
				wide variety of inflammatory	embodiment of the invention
				and cytotoxic effects on a	includes a method for
				variety of cells are well known	stimulating (e.g., increasing)
				in the art and may be used or	TNF alpha production.
				routinely modified to assess	Highly preferred indications
				the ability of polypeptides of	include blood disorders (e.g.,

an) to on, dd	on) to on, ad on, ad ins ins ition ition ition ition ition ition ition ition item. J item item item item item item item item	tivity", "Blood-	Related Disorders", and/or	"Cardiovascular Disorders"),	Highly preferred indications	include autoimmune diseases	(e.g., rheumatoid arthritis,	systemic lupus erythematosis,	Crohn"s disease, multiple	sclerosis and/or as described	below), immunodeficiencies	(e.g., as described below),	boosting a T cell-mediated	onse, and	suppressing a T cell-mediated	immune response. Additional	highly preferred indications	include inflammation and	inflammatory disorders, and	damage in	rheumatoid	arthritis. An additional highly	preferred indication is sepsis.	Highly preferred indications	include neoplastic diseases	(e.g., leukemia, lymphoma,	and/or as described below	under "Hyperproliferative	Disorders"). Additionally,	highly preferred indications
antibodies and agonists or antagonists of the invention) to mediate immunomodulation, modulate inflammation and cytotoxicity. Exemplary assays that test for immunomodulatory proteins evaluate the production of cytokines such as tumor necrosis factor alpha (TNFa), and the induction or inhibition of an inflammatory or cytotoxic response. Such assays that may be used or routinely modified to test immunomodulatory activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Miraglia et al., J Biomolecular Screening 4:193 204(1999); Rowland et al., "Lymphocytes: a practical approach" Chapter 6:138-160 (2000); Verhasselt et al., Eur J Immunol 28(11):3886-3890 (1198); Dahlen et al., J	antibodies and agonists or antagonists of the invention) to mediate immunomodulation, modulate inflammation and cytotoxicity. Exemplary assays that test for immunomodulatory proteins evaluate the production of cytokines such as tumor necrosis factor alpha (TNFa), and the induction or inhibition of an inflammatory or cytotoxic response. Such assays that may be used or routinely modified to test immunomodulatory activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Miraglia et al., J Biomolecular Screening 4:193 (2000); Verhasselt et al., Eur J Immunol 28(11):3886-3890 (1198); Dahlen et al., J Immunol 160(7):3885-3593	"Immune Activity", "Blood-			Highly prefer	include autoi	(e.g., rheuma	systemic lupu	Crohn"s dise	sclerosis and	below), imm		boosting a T	immune response, and	suppressing a	immune resp		include inflai	inflammatory	treating joint damage in	patients with rheumatoid	arthritis. An		Highly prefe	include neop	e.g., leukem		under "Hype	Disorders").	highly prefer
antibodia antagoni mediate modulate cytotoxi assays the immuno evaluate cytokine necrosis and the i of an inf cytotoxi assays the immuno polypept (includin agonists inventio disclose Biomole 204(199); Immuno (1198); Immuno (1198); Immuno (1198);	antibodia antibodia antibodia antagoni mediate modulate cytotoxia assays the immuno evaluate cytokine necrosis and the is of an infinanuo polypepto (includia agonists inventio disclose Biomole 204(199); Immuno (1198); Immuno (1198)	es and agonists or	sts of the invention) to	immunomodulation,	e inflammation and	city. Exemplary	nat test for	modulatory proteins	the production of	s such as tumor	factor alpha (TNFa),	nduction or inhibition	lammatory or	c response. Such	nat may be used or	/ modified to test	modulatory activity o	ides of the invention	ng antibodies and	or antagonists of the	n) include assays	d in Miraglia et al., J	cular Screening 4:193	9); Rowland et al.,	ocytes: a practical	n" Chapter 6:138-160	Verhasselt et al., Eur J	128(11):3886-3890	Dahlen et al., J	1160(7):3585-3593
		une myel	antagoni	mediate	modulate	cytotoxic	assays th	ounmui	evaluate	cytokine	necrosis	and the i	of an inf	cytotoxic	assays th	routinely	ommuno	polypept	(includin	agonists	invention	disclosed	Biomole	204(199	"Lymphe	approach	(2000); 1	Immuno	(1198); I	Immuno
					-			-													-					,-				

	[mmunol 158:2919-2925	cancers, such as, leukemia.
	(1997): and Nardelli et al J	lymphoma, melanoma, glioma
	Leukoc Biol 65:822-828	(e.g., malignant glioma), solid
 -	(1999), the contents of each of	tumors, and prostate, breast,
	which are herein incorporated	lung, colon, pancreatic,
	by reference in its entirety.	esophageal, stomach, brain,
	Human dendritic cells that may	liver and urinary cancer. Other
	be used according to these	preferred indications include
	assays may be isolated using	benign dysproliferative
	techniques disclosed herein or	disorders and pre-neoplastic
	otherwise known in the art.	conditions, such as, for
	Human dendritic cells are	example, hyperplasia,
	antigen presenting cells in	metaplasia, and/or dysplasia.
	suspension culture, which,	Preferred indications include
	when activated by antigen	anemia, pancytopenia,
 	and/or cytokines, initiate and	leukopenia, thrombocytopenia,
	upregulate T cell proliferation	Hodgkin's disease, acute
	and functional activities.	lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		arthritis, AIDS, granulomatous
		disease, inflammatory bowel
		disease, neutropenia,
		neutrophilia, psoriasis,
 		suppression of immune
		reactions to transplanted
		organs and tissues,
		hemophilia, hypercoagulation,
		diabetes mellitus, endocarditis,
		meningitis, Lyme Disease,
		cardiac reperfusion injury, and

HOEDB32 13	1361	MCP-1 in Eol-1		asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
HOEDB32 13	1361	Activation of transcription through serum response element in immune cells (such as natural killer cells).	Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate serum response factors and modulate the expression of genes involved in growth and upregulate the function of growth-related genes in many cell types. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays	A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, Crohn"s disease, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below),

																										-			
boosting a T cell-mediated immune response, and	suppressing a T cell-mediated	immune response. Additional	highly preferred indications	include inflammation and	inflammatory disorders, and	treating joint damage in	patients with rheumatoid	arthritis. An additional highly	preferred indication is sepsis.	Highly preferred indications	include neoplastic diseases	(e.g., leukemia, lymphoma,	and/or as described below	under "Hyperproliferative	Disorders"). Additionally,	highly preferred indications	include neoplasms and	cancers, such as, for example,	leukemia, lymphoma,	melanoma, glioma (e.g.,	malignant glioma), solid	tumors, and prostate, breast,	lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other	preferred indications include	benign dysproliferative	disorders and pre-neoplastic	conditions, such as, for
disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and	Malm, Methods in Enzymol	216:362-368 (1992); Henthorn	et al., Proc Natl Acad Sci USA	85:6342-6346 (1988); Benson	et al., J Immunol 153(9):3862-	3873 (1994); and Black et al.,	Virus Genes 12(2):105-117	(1997), the content of each of	which are herein incorporated	by reference in its entirety. T	cells that may be used	according to these assays are	publicly available (e.g.,	through the ATCC).	Exemplary T cells that may be	used according to these assays	include the NK-YT cell line,	which is a human natural killer	cell line with cytolytic and	cytotoxic activity.									
						-																							
																								,					

					example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues, hemophilia,
					hypercoagulation, diabetes
					mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HOEDB32	1361	Activation of	Assays for the activation of	A highly preferred
413			transcription	transcription through the	indication is allergy.
			through STAT6	Signal Transducers and	Another highly preferred
			response element in	Activators of Transcription	indication is asthma.
			immune cells (such	(STAT6) response element are	Additional highly preferred
			as T-cells).	well-known in the art and may	indications include

be used or routinely modified	inflammation and
to assess the ability of	inflammatory disorders.
polypeptides of the invention	Preferred indications include
(including antibodies and	blood disorders (e.g., as
agonists or antagonists of the	described below under
invention) to regulate STAT6	"Immune Activity", "Blood-
transcription factors and	Related Disorders", and/or
modulate the expression of	"Cardiovascular Disorders").
multiple genes. Exemplary	Preferred indications include
assays for transcription	autoimmune diseases (e.g.,
through the STAT6 response	rheumatoid arthritis, systemic
element that may be used or	lupus erythematosis, multiple
routinely modified to test	sclerosis and/or as described
STAT6 response element	below) and
activity of the polypeptides of	immunodeficiencies (e.g., as
the invention (including	described below).
antibodies and agonists or	Preferred indications include
antagonists of the invention)	neoplastic diseases (e.g.,
include assays disclosed in	leukemia, lymphoma,
Berger et al., Gene 66:1-10	melanoma, and/or as described
(1998); Cullen and Malm,	below under
Methods in Enzymol 216:362-	"Hyperproliferative
368 (1992); Henthorn et al.,	Disorders"). Preferred
Proc Natl Acad Sci USA	indications include neoplasms
85:6342-6346 (1988); Georas	and cancers, such as, leukemia,
et al., Blood 92(12):4529-4538	lymphoma, melanoma, and
(1998); Moffatt et al.,	prostate, breast, lung, colon,
Transplantation 69(7):1521-	pancreatic, esophageal,
1523 (2000); Curiel et al., Eur	stomach, brain, liver and
J Immunol 27(8):1982-1987	urinary cancer. Other preferred
(1997); and Masuda et al., J	indications include benign

				Biol Chem 275(38):29331-	dysproliferative disorders and
				29337 (2000), the contents of	pre-neoplastic conditions, such
		-		each of which are herein	as, for example, hyperplasia,
				incorporated by reference in its	metaplasia, and/or dysplasia.
				entirety. T cells that may be	Preferred indications include
				used according to these assays	anemia, pancytopenia,
				are publicly available (e.g.,	leukopenia, thrombocytopenia,
				through the ATCC).	Hodgkin's disease, acute
				Exemplary T cells that may be	lymphocytic anemia (ALL),
				used according to these assays	plasmacytomas, multiple
				include the SUPT cell line,	myeloma, Burkitt's lymphoma,
				which is a suspension culture	arthritis, AIDS, granulomatous
				of IL-2 and IL-4 responsive T	disease, inflammatory bowel
				cells.	disease, sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, and Lyme Disease.
					An additional preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
	HOEDE28	1362	Production of TNF	TNFa FMAT. Assays for	A highly preferred
414			alpha by dendritic	immunomodulatory proteins	embodiment of the invention
			cells	produced by activated	includes a method for
				macrophages, T cells,	inhibiting (e.g., decreasing)
				fibroblasts, smooth muscle,	TNF alpha production. An

	and other cell types that exert a	alternative highly preferred
	wide variety of inflammatory	embodiment of the invention
	and cytotoxic effects on a	includes a method for
	variety of cells are well known	stimulating (e.g., increasing)
	in the art and may be used or	TNF alpha production.
	routinely modified to assess	Highly preferred indications
	the ability of polypeptides of	include blood disorders (e.g.,
	the invention (including	as described below under
	antibodies and agonists or	"Immune Activity", "Blood-
	antagonists of the invention) to	Related Disorders", and/or
 	mediate immunomodulation,	"Cardiovascular Disorders"),
	modulate inflammation and	Highly preferred indications
	cytotoxicity. Exemplary	include autoimmune diseases
	assays that test for	(e.g., rheumatoid arthritis,
	immunomodulatory proteins	systemic lupus erythematosis,
	evaluate the production of	Crohn's disease, multiple
	cytokines such as tumor	sclerosis and/or as described
 	necrosis factor alpha (TNFa),	below), immunodeficiencies
	and the induction or inhibition	(e.g., as described below),
	of an inflammatory or	boosting a T cell-mediated
	cytotoxic response. Such	immune response, and
	assays that may be used or	suppressing a T cell-mediated
	routinely modified to test	immune response. Additional
	immunomodulatory activity of	highly preferred indications
	polypeptides of the invention	include inflammation and
	(including antibodies and	inflammatory disorders, and
- M	agonists or antagonists of the	treating joint damage in
	invention) include assays	patients with rheumatoid
	disclosed in Miraglia et al., J	arthritis. An additional highly
	Biomolecular Screening 4:193-	preferred indication is sepsis.
	204(1999); Rowland et al.,	Highly preferred indications

include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Additionally	highly preferred indications include neoplasms and cancers, such as, leukemia, lymphoma, melanoma, glioma (e.g., malignant glioma), solid	tumors, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include	benign dysproliterative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include	anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple	myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis,
include (e.g., let and/or a under "I	highly p include cancers, lymphor		disorder conditio example metapla Preferre	anemia, leukope Hodgkii lymphoe	arthritis, disease, disease, neutropl
"Lymphocytes: a practical approach" Chapter 6:138-160 (2000); Verhasselt et al., Eur J Immunol 28(11):3886-3890 (1108). Dahlen et al.	Immunol 160(7):3585-3593 (1998); Verhasselt et al., J Immunol 158:2919-2925 (1997); and Nardelli et al., J Leukoc Biol 65:822-828	(1999), the contents of each of which are herein incorporated by reference in its entirety. Human dendritic cells that may be used according to these	assays may be isolated using techniques disclosed herein or otherwise known in the art. Human dendritic cells are antigen presenting cells in suspension culture, which,	when activated by antigen and/or cytokines, initiate and upregulate T cell proliferation and functional activities.	

414	HOEDE28	1362	IL-10 in Human T- cell 2B9 Activation of transcription through STAT6 response element in	Assays for the activation of transcription through the Signal Transducers and Activators of Transcription	suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infectiou (e.g., an infectious disease as described below under "Infectious Disease").  A highly preferred indication is allergy. Another highly preferred indication is asthma.
			as T-cells).	(STAT6) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate STAT6 transcription factors and modulate the expression of multiple genes. Exemplary assays for transcription the STAT6 response	Additional highly preferred indications include inflammatory disorders.  Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders").  Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic

ve he used or lumis erythematosis multiple	5	se element below) and	oolypeptides of   immunodeficiencies (e.g., as		agonists or Preferred indications include	he invention) neoplastic diseases (e.g.,			and Malm,   below under	symol 216:362-   "Hyperproliferative	nthorn et al.,   Disorders"). Preferred	Sci USA   indications include neoplasms	1988); Georas and cancers, such as, leukemia,	(12):4529-4538   lymphoma, melanoma, and	et al., prostate, breast, lung, colon,	<u> </u>	uriel et al., Eur   stomach, brain, liver and	3):1982-1987 urinary cancer. Other preferred	suda et al., J indications include benign	(38):29331- dysproliferative disorders and	he contents of pre-neoplastic conditions, such	re herein as, for example, hyperplasia,	incorporated by reference in its   metaplasia, and/or dysplasia.	s that may be   Preferred indications include	to these assays   anemia, pancytopenia,	ailable (e.g.,   leukopenia, thrombocytopenia,	CC). Hodgkin's disease, acute	ells that may be   lymphocytic anemia (ALL),	to these assays   plasmacytomas, multiple	D. 2.11 12
of beau of may that may be used or	routinely modified to test	STAT6 response element	activity of the polypeptides of	the invention (including	antibodies and agonists or	antagonists of the invention)	include assays disclosed in	Berger et al., Gene 66:1-10	(1998); Cullen and Malm,	Methods in Enzymol 216:362-	368 (1992); Henthorn et al.,	Proc Natl Acad Sci USA	85:6342-6346 (1988); Georas	et al., Blood 92(12):4529-4538	(1998); Moffatt et al.,	Transplantation 69(7):1521-	1523 (2000); Curiel et al., Eur	J Immunol 27(8):1982-1987	(1997); and Masuda et al., J	Biol Chem 275(38):29331-	29337 (2000), the contents of	each of which are herein	incorporated by	entirety. T cells that may be	used according to these assays	are publicly available (e.g.,	hrough the ATCC).	Exemplary T cells that may be	used according to these assays	

				which is a suspension culture of IL-2 and IL-4 responsive T cells.	arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additional preferred indication is infectiou (e.g., an infectious disease as described below under "Infectious
416	HOEFV61	1364	Activation of transcription through GATA-3 response element in immune cells (such as mast cells).	This reporter assay measures activation of the GATA-3 signaling pathway in HMC-1 human mast cell line. Activation of GATA-3 in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the GATA3 response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or	Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and inflammation and inflammatory disorders. Preferred indications also include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include

	antagonists of the invention) to	autoimmune diseases (e.g.,
	regulate GATA3 transcription	rheumatoid arthritis, systemic
	factors and modulate	lupus erythematosis, multiple
	expression of mast cell genes	sclerosis and/or as described
	important for immune response	below) and
	development. Exemplary	immunodeficiencies (e.g., as
	assays for transcription	described below). Preferred
	through the GATA3 response	indications include neoplastic
	element that may be used or	diseases (e.g., leukemia,
	routinely modified to test	lymphoma, melanoma,
	GATA3-response element	prostate, breast, lung, colon,
	activity of polypeptides of the	pancreatic, esophageal,
	invention (including antibodies	stomach, brain, liver, and
	and agonists or antagonists of	urinary tract cancers and/or as
	the invention) include assays	described below under
	disclosed in Berger et al., Gene	"Hyperproliferative
 	66:1-10 (1998); Cullen and	Disorders"). Other preferred
	Malm, Methods in Enzymol	indications include benign
	216:362-368 (1992); Henthorn	dysproliferative disorders and
	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
	Quant Biol 64:563-571 (1999);	Preferred indications include
	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
 	J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
	(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
	Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
	14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
	contents of each of which are	lymphoma, arthritis, AIDS,
	herein incorporated by	granulomatous disease,

				reference in its entirety. Mast cells that may be used	inflammatory bowel disease, sepsis, neutropenia,
				according to these assays are publicly available (e.g.,	neutrophilia, psoriasis, suppression of immune
				through the ATCC).	reactions to transplanted
				Exemplary human mast cells	organs and tissues, hemophilia,
				that may be used according to	hypercoagulation, diabetes
				These assays include the rivior	mellitus, endocardius,
				immeting himon most coll line	mennights, and Lynne Disease.
				immature numan mast cent line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
416	HOEFV61	1364	VEGF in SW480		
	НОҒМQ33	1365	Regulation of	Assays for the regulation of	A highly preferred indication
417			viability and	viability and proliferation of	is diabetes mellitus. An
			proliferation of	cells in vitro are well-known in	additional highly preferred
			pancreatic beta	the art and may be used or	indication is a complication
			cells.	routinely modified to assess	associated with diabetes (e.g.,
				the ability of polypeptides of	diabetic retinopathy, diabetic
				the invention (including	nephropathy, kidney disease
				antibodies and agonists or	(e.g., renal failure,
				antagonists of the invention) to	nephropathy and/or other
				regulate viability and	diseases and disorders as
				proliferation of pancreatic beta	described in the "Renal
		_		cells. For example, the Cell	Disorders" section below),
				Titer-Glo luminescent cell	diabetic neuropathy, nerve
				viability assay measures the	disease and nerve damage

number of viable cells in	(e.g., due to diabetic
culture based on quantitation	neuropathy), blood vessel
of the ATP present which	blockage, heart disease, stroke,
signals the presence of	impotence (e.g., due to diabetic
metabolically active cells.	neuropathy or blood vessel
Exemplary assays that may be	blockage), seizures, mental
used or routinely modified to	confusion, drowsiness,
test regulation of viability and	nonketotic hyperglycemic-
proliferation of pancreatic beta	hyperosmolar coma,
cells by polypeptides of the	cardiovascular disease (e.g.,
invention (including antibodies	heart disease, atherosclerosis,
and agonists or antagonists of	microvascular disease,
the invention) include assays	hypertension, stroke, and other
disclosed in: Ohtani KI, et al.,	diseases and disorders as
Endocrinology, 139(1):172-8	described in the
(1998); Krautheim A, et al,	"Cardiovascular Disorders"
Exp Clin Endocrinol Diabetes,	section below), dyslipidemia,
107 (1):29-34 (1999), the	endocrine disorders (as
 contents of each of which is	described in the "Endocrine
 herein incorporated by	Disorders" section below),
reference in its entirety.	neuropathy, vision impairment
Pancreatic cells that may be	(e.g., diabetic retinopathy and
used according to these assays	blindness), ulcers and impaired
are publicly available (e.g.,	wound healing, and infection
through the ATCC) and/or	(e.g., infectious diseases and
may be routinely generated.	disorders as described in the
Exemplary pancreatic cells that	"Infectious Diseases" section
may be used according to these	below, especially of the
assays include HITT15 Cells.	urinary tract and skin), carpal
HITT15 are an adherent	tunnel syndrome and
epithelial cell line established	Dupuytren's contracture). An

lls additional highly preferred indication is obesity and/or complications associated with obesity. Additional highly preferred indications include weight loss or alternatively, weight gain. Additional highly preferred indications are complications associated with insulin resistance.		Preferred indications include neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), blood disorders (e.g., as described below under "Immune Activity", "Cardiovascular Disorders", and/or "Blood-Related Disorders"), and infection (e.g., an infectious disease as described below under "Infectious Disease"). Highly preferred indications include
from Syrian hamster islet cells transformed with SV40. These cells express glucagon, somatostatin, and glucocorticoid receptors. The cells secrete insulin, which is stimulated by glucose and glucagon and suppressed by somatostatin or glucocorticoids. ATTC# CRL-1777 Refs: Lord and Ashcroft. Biochem. J. 219: 547-551; Santerre et al. Proc. Natl. Acad. Sci. USA 78: 4339-4343, 1981.		Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote or inhibit immune cell (e.g. T-cell) proliferation, activation, and apoptosis.
	SEAP in Molt4/SRE	Activation of T-Cell p38 or JNK Signaling Pathway.
	1365	1366
	HOFMQ33	HOFMT75
·	417	418

Exemplar		autoimmune diseases (e.g.,
p38 kinas	<u>ဗ</u>	rheumatoid arthritis, systemic
nsed or rc	used or routinely modified to	lupus erythematosis, multiple
test JNK	test JNK and p38 kinase-	sclerosis and/or as described
induced activity of	ctivity of	below) and
polypepti	polypeptides of the invention	immunodeficiencies (e.g., as
(including	(including antibodies and	described below). Additional
agonists o	agonists or antagonists of the	highly preferred indications
invention	invention) include the assays	include inflammation and
disclosed	disclosed in Forrer et al., Biol	inflammatory disorders.
Chem 376	Chem 379(8-9):1101-1110	Highly preferred indications
(1998); G	(1998); Gupta et al., Exp Cell	also include neoplastic
Res 247(2	Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
Kyriakis.	Kyriakis JM, Biochem Soc	lymphoma, and/or as described
Symp 64:	Symp 64:29-48 (1999); Chang	below under
and Karin, Nature	, Nature	"Hyperproliferative
410(6824	410(6824):37-40 (2001); and	Disorders"). Highly preferred
Cobb MF	Cobb MH, Prog Biophys Mol	indications include neoplasms
Biol 71(3	Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
the conter	the contents of each of which	lymphoma, prostate, breast,
are herein	are herein incorporated by	lung, colon, pancreatic,
reference	reference in its entirety. T	esophageal, stomach, brain,
cells that	cells that may be used	liver, and urinary cancer. Other
according	according to these assays are	preferred indications include
publicly a	publicly available (e.g.,	benign dysproliferative
through th	through the ATCC).	disorders and pre-neoplastic
Exemplar	Exemplary mouse T cells that	conditions, such as, for
may be us	se	example, hyperplasia,
assays inc	assays include the CTLL cell	metaplasia, and/or dysplasia.
line, whic	line, which is an IL-2	Preferred indications include
dependen	dependent suspension-culture	arthritis, asthma, AIDS,

				cell line with cytotoxic activity.	allergy, anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin"s disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt"s lymphoma, granulomatous disease, inflammatory bowel disease, sepsis, psoriasis, suppression of immune reactions to transplanted organs and tissues, endocarditis, meningitis, and Lyme Disease.
814	HOFMT75	1366	Activation of Endothelial Cell p38 or JNK Signaling Pathway.	Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote or inhibit cell proliferation, activation, and apoptosis. Exemplary assays for JNK and p38 kinase activity that may be used or routinely modified to test JNK	A highly preferred embodiment of the invention includes a method for stimulating endothelial cell growth. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell growth. A highly preferred embodiment of the invention includes a method for stimulating endothelial cell proliferation. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell proliferation.

activity of polypeptides of the	embodiment of the invention
invention (including antibodies	includes a method for
and agonists or antagonists of	stimulating apoptosis of
the invention) include the	endothelial cells. An
 assays disclosed in Forrer et	alternative highly preferred
 al., Biol Chem 379(8-9):1101-	embodiment of the invention
1110 (1998); Gupta et al., Exp	includes a method for
 Cell Res 247(2): 495-504	inhibiting (e.g., decreasing)
(1999); Kyriakis JM, Biochem	apoptosis of endothelial cells.
Soc Symp 64:29-48 (1999);	A highly preferred
Chang and Karin, Nature	embodiment of the invention
410(6824):37-40 (2001); and	includes a method for
 Cobb MH, Prog Biophys Mol	stimulating (e.g., increasing)
Biol 71(3-4):479-500 (1999);	endothelial cell activation. An
the contents of each of which	alternative highly preferred
are herein incorporated by	embodiment of the invention
reference in its entirety.	includes a method for
Endothelial cells that may be	inhibiting (e.g., decreasing) the
used according to these assays	activation of and/or
are publicly available (e.g.,	inactivating endothelial cells.
through the ATCC).	A highly preferred
Exemplary endothelial cells	embodiment of the invention
that may be used according to	includes a method for
these assays include human	stimulating angiogenisis. An
 umbilical vein endothelial cells	alternative highly preferred
(HUVEC), which are	embodiment of the invention
endothelial cells which line	includes a method for
venous blood vessels, and are	inhibiting angiogenesis. A
involved in functions that	highly preferred embodiment
include, but are not limited to,	of the invention includes a
angiogenesis, vascular	method for reducing cardiac

permeability, vascular tone,	hypertrophy. An alternative
and immune cell extravasation.	highly preferred embodiment
	of the invention includes a
	method for inducing cardiac
	hypertrophy. Highly
	preferred indications include
	neoplastic diseases (e.g., as
	described below under
	"Hyperproliferative
	Disorders"), and disorders of
	the cardiovascular system
	(e.g., heart disease, congestive
	heart failure, hypertension,
	aortic stenosis,
	cardiomyopathy, valvular
	regurgitation, left ventricular
	dysfunction, atherosclerosis
	and atherosclerotic vascular
	disease, diabetic nephropathy,
	intracardiac shunt, cardiac
	hypertrophy, myocardial
	infarction, chronic
	hemodynamic overload, and/or
	as described below under
	"Cardiovascular Disorders").
	Highly preferred indications
	include cardiovascular,
	endothelial and/or angiogenic
	disorders (e.g., systemic
	disorders that affect vessels
	such as diabetes mellitus, as

well as diseases of the vessels themselves, such as of the	arteries, capillaries, veins	and/or lymphatics). Highly	preferred are indications that	stimulate angiogenesis and/or	cardiovascularization. Highly	preferred are indications that	inhibit angiogenesis and/or	cardiovascularization.	Highly preferred indications	include antiangiogenic activity	to treat solid tumors,	leukemias, and Kaposi"s	sarcoma, and retinal disorders.	Highly preferred indications	include neoplasms and cancer,	such as, Kaposi"s sarcoma,	hemangioma (capillary and	cavernous), glomus tumors,	telangiectasia, bacillary	angiomatosis,	hemangioendothelioma,	angiosarcoma,	haemangiopericytoma,	lymphangioma,	lymphangiosarcoma. Highly	preferred indications also	include cancers such as,	prostate, breast, lung, colon,	pancreatic, esophageal,
	-																	_											

stomach, brain, liver, and urinary cancer. Preferred indications include benign	dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia,	metaplasia, and/or dysplasia. Highly preferred indications also include arterial disease, such as, atherosclerosis,	hypertension, coronary artery disease, inflammatory vasculitides, Reynaud''s	phenomenom, aneurysms, restenosis; venous and	lymphatic disorders such as thrombophlebitis, lymphangitis, and lymphedema; and other	vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also	include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and	atheroschlerotic lesions), implant fixation, scarring,

crebrovascular disease, renal diseases such as acute renal disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagularitis, lymph angiogenesis, sexual disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.  Additional highly preferred indications include fibromas, heart disease, cardiac arrest, heart valve disease, and vascular disease.  Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders"), Preferred indications include Related Disorders', and/or "Cardiovascular Disorders").  Preferred indications include Related Disorders', and/or "Cardiovascular Disorders").
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autoimmune diseases (e.g.,
rheumatoid arthritis, systemic
lupus erythematosis, multiple

				sclerosis and/or as described
				below) and immunodeficiencies (e.g., as
				described below). Additional
				preferred indications include
				inflammation and
				inflammatory disorders (such
				as acute and chronic
				inflammatory diseases, e.g.,
-	_,			inflammatory bowel disease
				and Crohn's disease), and pain
,				management.
HOFNC14	1367	Activation of JNK	Kinase assay. JNK kinase	Highly preferred indications
		Signaling Pathway	assays for signal transduction	include asthma, allergy,
		in immune cells	that regulate cell proliferation,	hypersensitivity reactions,
		(such as	activation, or apoptosis are	inflammation, and
		eosinophils).	well known in the art and may	inflammatory disorders.
			be used or routinely modified	Additional highly preferred
			to assess the ability of	indications include immune
			polypeptides of the invention	and hematopoietic disorders
			(including antibodies and	(e.g., as described below under
			agonists or antagonists of the	"Immune Activity", and
_			invention) to promote or	"Blood-Related Disorders"),
			inhibit cell proliferation,	autoimmune diseases (e.g.,
·			activation, and apoptosis.	rheumatoid arthritis, systemic
			Exemplary assays for JNK	lupus erythematosis, Crohn"s
			kinase activity that may be	disease, multiple sclerosis
			used or routinely modified to	and/or as described below),
			test JNK kinase-induced	immunodeficiencies (e.g., as
			activity of polypeptides of the	described below). Highly
			invention (including antibodies	preferred indications also

	and agonists or antagonists of	include boosting or inhibiting
	the invention) include the	immune cell proliferation.
-	assays disclosed in Forrer et	Preferred indications include
	al., Biol Chem 379(8-9):1101-	neoplastic diseases (e.g.,
	1110 (1998); Gupta et al., Exp	leukemia, lymphoma, and/or as
	Cell Res 247(2): 495-504	described below under
	(1999); Kyriakis JM, Biochem	"Hyperproliferative
	Soc Symp 64:29-48 (1999);	Disorders"). Highly preferred
	Chang and Karin, Nature	indications include boosting an
	410(6824):37-40 (2001); and	eosinophil-mediated immune
	Cobb MH, Prog Biophys Mol	response, and suppressing an
	Biol 71(3-4):479-500 (1999);	eosinophil-mediated immune
	the contents of each of which	response.
	are herein incorporated by	
	reference in its entirety.	
	Exemplary cells that may be	
	used according to these assays	
	include eosinophils.	
	Eosinophils are important in	
	the late stage of allergic	
	reactions; they are recruited to	
	tissues and mediate the	
	inflammatory response of late	
	stage allergic reaction.	
	Moreover, exemplary assays	
	that may be used or routinely	
	modified to assess the ability	
	of polypeptides of the	
	invention (including antibodies	
	and agonists or antagonists of	
	the invention) to modulate	

signal transduction, cell proliferation, activation, or apoptosis in eosinophils include assays disclosed and/or cited in: Zhang JP, et al., "Role of caspases in dexamethasone-induced apoptosis and activation of c-Jun NH2-terminal kinase and p38 mitogen-activated protein kinase in human eosinophils" Clin Exp Immunol;	Oct;122(1):20-7 (2000); Hebestreit H, et al., "Disruption of fas receptor signaling by nitric oxide in eosinophils" J Exp Med; Feb 2;187(3):415-25 (1998); J Allergy Clin Immunol 1999 Sep;104(3 Pt 1):565-74; and, Sousa AR, et al., "In vivo resistance to corticosteroids in bronchial asthma is associated with enhanced phosyphorylation of JUN N-terminal kinase and failure of prednisolone to inhibit JUN N-terminal kinase phosphorylation" J Allergy Clin Immunol; Sep;104(3 Pt 1):565-74 (1999); the contents

	ļ			of each of which are herein	
				incorporated by reference in its	
!	!			entirety.	
	HOFND85	1368	Activation of	Assays for the activation of	Highly preferred indications
420			transcription	transcription through the	include inflammation and
			through NFKB	NFKB response element are	inflammatory disorders.
			response element in	well-known in the art and may	Highly preferred indications
			immune cells (such	be used or routinely modified	include blood disorders (e.g.,
			as T-cells).	to assess the ability of	as described below under
				polypeptides of the invention	"Immune Activity", "Blood-
				(including antibodies and	Related Disorders", and/or
				agonists or antagonists of the	"Cardiovascular Disorders").
	-			invention) to regulate NFKB	Highly preferred indications
				transcription factors and	include autoimmune diseases
				modulate expression of	(e.g., rheumatoid arthritis,
		<del> </del>		immunomodulatory genes.	systemic lupus erythematosis,
				Exemplary assays for	multiple sclerosis and/or as
				transcription through the	described below), and
				NFKB response element that	immunodeficiencies (e.g., as
		_		may be used or rountinely	described below). An
				modified to test NFKB-	additional highly preferred
				response element activity of	indication is infection (e.g.,
				polypeptides of the invention	AIDS, and/or an infectious
				(including antibodies and	disease as described below
				agonists or antagonists of the	under "Infectious Disease").
				invention) include assays	Highly preferred indications
				disclosed in Berger et al., Gene	include neoplastic diseases
				66:1-10 (1998); Cullen and	(e.g., melanoma, leukemia,
				Malm, Methods in Enzymol	lymphoma, and/or as described
				216:362-368 (1992); Henthorn	below under
				et al., Proc Natl Acad Sci USA	"Hyperproliferative

85:6342-6	85:6342-6346 (1988); Black et	Disorders"). Highly preferred
al., Virus	-117	indications include neoplasms
(1997); ar		and cancers, such
29(3):838	29(3):838-844 (1999), the	as,melanoma, renal cell
contents o	contents of each of which are	carcinoma, leukemia,
herein inc	herein incorporated by	lymphoma, and prostate,
reference	reference in its entirety. T	breast, lung, colon, pancreatic,
cells that	cells that may be used	esophageal, stomach, brain,
according	according to these assays are	liver and urinary cancer. Other
publicly a	publicly available (e.g.,	preferred indications include
through the ATCC)	e ATCC).	benign dysproliferative
Exemplar	Exemplary human T cells that	disorders and pre-neoplastic
may be us	se	conditions, such as, for
assays inc	assays include the SUPT cell	example, hyperplasia,
line, whic	line, which is a suspension	metaplasia, and/or dysplasia.
culture of	culture of IL-2 and IL-4	Preferred indications also
responsive T cells.	T cells.	include anemia, pancytopenia,
		leukopenia, thrombocytopenia,
		Hodgkin's disease, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		arthritis, AIDS,
		granulomatous disease,
		inflammatory bowel disease,
		sepsis, neutropenia,
		neutrophilia, psoriasis,
		hemophilia, hypercoagulation,
		diabetes mellitus, endocarditis,
		meningitis, Lyme Disease,
		suppression of immune

					reactions to transplanted
					organs, asthma and allergy.
	HOFNY91	1369	Activation of	Assays for the activation of	A preferred embodiment of
421			transcription	transcription through the	the invention includes a
			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha
			immune cells (such	art and may be used or	production. An alternative
			as T-cells).	routinely modified to assess	preferred embodiment of the
				the ability of polypeptides of	invention includes a method
				the invention (including	for stimulating (e.g.,
				antibodies and agonists or	increasing) TNF alpha
				antagonists of the invention) to	production. Preferred
				regulate the serum response	indications include blood
				factors and modulate the	disorders (e.g., as described
				expression of genes involved	below under "Immune
				in growth. Exemplary assays	Activity", "Blood-Related
				for transcription through the	Disorders", and/or
				SRE that may be used or	"Cardiovascular Disorders"),
				routinely modified to test SRE	Highly preferred indications
				activity of the polypeptides of	include autoimmune diseases
				the invention (including	(e.g., rheumatoid arthritis,
				antibodies and agonists or	systemic lupus erythematosis,
				antagonists of the invention)	Crohn"s disease, multiple
				include assays disclosed in	sclerosis and/or as described
				Berger et al., Gene 66:1-10	below), immunodeficiencies
				(1998); Cullen and Malm,	(e.g., as described below),
				Methods in Enzymol 216:362-	boosting a T cell-mediated
				368 (1992); Henthorn et al.,	immune response, and
				Proc Natl Acad Sci USA	suppressing a T cell-mediated
				85:6342-6346 (1988); and	immune response. Additional
				Black et al., Virus Genes	highly preferred indications

include inflammation and inflammatory disorders, and	patients with rheumatoid	arthritis. An additional highly preferred indication is sepsis.	Highly preferred indications include neoplastic diseases	(e.g., leukemia, lymphoma,	and/or as described below	under "Hyperproliterative Disorders"). Additionally,	highly preferred indications	include neoplasms and	cancers, such as, for example,	leukemia, lymphoma,	melanoma, glioma (e.g.,	malignant glioma), solid	tumors, and prostate, breast,	lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other	preferred indications include	benign dysproliferative	disorders and pre-neoplastic	conditions, such as, for	example, hyperplasia,	metaplasia, and/or dysplasia.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,
12(2):105-117 (1997), the content of each of which are	reference in its entirety. T	cells that may be used according to these assays are	publicly available (e.g., through the ATCC).	Exemplary mouse T cells that	may be used according to these	assays include the C1LL cell line, which is an IL-2	dependent suspension culture	of T cells with cytotoxic	activity.																

					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
	-				arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HOFNY91	1369	Production of	Assays for measuring	Highly preferred indications
421			VCAM in	expression of VCAM are well-	include inflammation (acute
			endothelial cells	known in the art and may be	and chronic), restnosis,
			(such as human	used or routinely modified to	atherosclerosis, asthma and
			umbilical vein	assess the ability of	allergy. Highly preferred
			endothelial cells	polypeptides of the invention	indications include
			(HUVEC))	(including antibodies and	inflammation and
				agonists or antagonists of the	inflammatory disorders,
				invention) to regulate VCAM	immunological disorders,
				expression. For example,	neoplastic disorders (e.g.
				FMAT may be used to meaure	cancer/tumorigenesis), and

				the upregulation of cell surface	cardiovascular disorders (such
				VCAM-1 expresssion in	as described below under
				endothelial cells. Endothelial	"Immune Activity", "Blood-
				cells are cells that line blood	Related Disorders",
				vessels, and are involved in	"Hyperproliferative Disorders"
				functions that include, but are	and/or "Cardiovascular
				not limited to, angiogenesis,	Disorders"). Highly preferred
				vascular permeability, vascular	indications include neoplasms
				tone, and immune cell	and cancers such as, for
				extravasation. Exemplary	example, leukemia, lymphoma,
				endothelial cells that may be	melanoma, renal cell
				used according to these assays	carcinoma, and prostate,
				include human umbilical vein	breast, lung, colon, pancreatic,
				endothelial cells (HUVEC),	esophageal, stomach, brain,
				which are available from	liver and urinary cancer. Other
				commercial sources. The	preferred indications include
				expression of VCAM	benign dysproliferative
				(CD106), a membrane-	disorders and pre-neoplastic
				associated protein, can be	conditions, such as, for
				upregulated by cytokines or	example, hyperplasia,
				other factors, and contributes	metaplasia, and/or dysplasia.
				to the extravasation of	
				lymphocytes, leucocytes and	
				other immune cells from blood	
				vessels; thus VCAM	
				expression plays a role in	
				promoting immune and	
				inflammatory responses.	
667	НОГОСЗЗ	1370	SEAP in ATP-3T3- 1 1		
	HOFOC33	1370	Activation of	Assavs for the activation of	Highly preferred indications
	2000 1011	2/21	To Home of	to troup and the form	succession and fundament

422	transcription	transcription through the	include inflammation and
	through NFKB	NFKB response element are	inflammatory disorders.
	response element in	well-known in the art and may	Highly preferred indications
	immune cells (such	be used or routinely modified	include blood disorders (e.g.,
	as natural killer	to assess the ability of	as described below under
	cells).	polypeptides of the invention	"Immune Activity", "Blood-
		including antibodies and	Related Disorders", and/or
		agonists or antagonists of the	"Cardiovascular Disorders").
		invention) to regulate NFKB	Highly preferred indications
		transcription factors and	include autoimmune diseases
		modulate expression of	(e.g., rheumatoid arthritis,
		immunomodulatory genes.	systemic lupus erythematosis,
		Exemplary assays for	multiple sclerosis and/or as
		transcription through the	described below), and
		NFKB response element that	immunodeficiencies (e.g., as
		may be used or rountinely	described below). An
		modified to test NFKB-	additional highly preferred
		response element activity of	indication is infection (e.g.,
		polypeptides of the invention	AIDS, and/or an infectious
		(including antibodies and	disease as described below
		agonists or antagonists of the	under "Infectious Disease").
		invention) include assays	Highly preferred indications
		disclosed in Berger et al., Gene	include neoplastic diseases
		66:1-10 (1998); Cullen and	(e.g., melanoma, leukemia,
		Malm, Methods in Enzymol	lymphoma, and/or as described
		216:362-368 (1992); Henthorn	below under
		et al., Proc Natl Acad Sci USA	"Hyperproliferative
		85:6342-6346 (1988); Valle	Disorders"). Highly preferred
		Blazquez et al, Immunology	indications include neoplasms
		90(3):455-460 (1997);	and cancers, such as, for
		Aramburau et al., J Exp Med	example, melanoma, renal cell

				82(3):801-810 (1995); and Fraser et al., 29(3):838-844	carcinoma, leukemia, lymphoma, and prostate.
				(1999), the contents of each of	breast, lung, colon, pancreatic,
				which are herein incorporated	esophageal, stomach, brain,
				by reference in its entirety.	liver and urinary cancer. Other
				NK cells that may be used	preferred indications include
				according to these assays are	benign dysproliferative
				publicly available (e.g.,	disorders and pre-neoplastic
				through the ATCC).	conditions, such as, for
				Exemplary human NK cells	example, hyperplasia,
				that may be used according to	metaplasia, and/or dysplasia.
				these assays include the NKL	Preferred indications also
				cell line, which is a human	include anemia, pancytopenia,
				natural killer cell line	leukopenia, thrombocytopenia,
				established from the peripheral	Hodgkin's disease, acute
				blood of a patient with large	lymphocytic anemia (ALL),
				granular lymphocytic	plasmacytomas, multiple
				leukemia. This IL-2 dependent	myeloma, Burkitt's lymphoma,
				suspension culture cell line has	arthritis, AIDS, granulomatous
				a morphology resembling that	disease, inflammatory bowel
				of activated NK cells.	disease, sepsis, neutropenia,
					neutrophilia, psoriasis,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					suppression of immune
					reactions to transplanted
					organs, asthma and allergy.
	НОГОС73	1371	Myoblast cell		Highly preferred indications
423			proliferation	proliferation are well known in	include diabetes, myopathy,
				the art and may be used or	muscle cell atrophy, cancers of

	routinely modified to assess	se dons) elosita
	tournets invalined to descess	inascie (saen as,
	the ability of polypeptides of	rhabdomyoma, and
	the invention (including	rhabdosarcoma),
	antibodies and agonists or	cardiovascular disorders (such
	antagonists of the invention) to	as congestive heart failure,
	stimulate or inhibit myoblast	cachexia, myxomas, fibromas,
	cell proliferation. Exemplary	congenital cardiovascular
	assays for myoblast cell	abnormalities, heart disease,
	proliferation that may be used	cardiac arrest, heart valve
	or routinely modified to test	disease, vascular disease, and
	activity of polypeptides and	also as described below under
	antibodies of the invention	"Cardiovascular Disorders"),
	(including agonists or	stimulating myoblast
	antagonists of the invention)	proliferation, and inhibiting
	include, for example, assays	myoblast proliferation.
	disclosed in: Soeta, C., et al.	
	"Possible role for the c-ski	
	gene in the proliferation of	
_	myogenic cells in regenerating	
	skeletal muscles of rats" Dev	
	Growth Differ Apr;43(2):155-	
	64 (2001); Ewton DZ, et al.,	
	"IGF binding proteins-4, -5	
	and -6 may play specialized	
	roles during L6 myoblast	
	proliferation and	
	differentiation" J Endocrinol	
	Mar;144(3):539-53 (1995);	
	and, Pampusch MS, et	
	al.,"Effect of transforming	
	growth factor beta on	

				proliferation of L6 and embryonic porcine myogenic cells." J Cell Physiol Jun;143(3):524-8 (1990); the contents of each of which are herein incorporated by reference in their entirety.  Exemplary myoblast cells that may be used according to these assays include the rat myoblast L6 cells are an adherent rat myoblast cell line. Rat myoblast L6 cells are an adherent rat myoblast cell line, isolated from primary cultures of rat thigh muscle, that fuse to form multinucleated myotubes and striated fibers after culture in differentiation media.	
423	H0F0C73	1371	Caspase (+camptothecin) in SW480		
424	HOGAW62	1372	Activation of Endothelial Cell p38 or JNK Signaling Pathway.	Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or	A highly preferred embodiment of the invention includes a method for stimulating endothelial cell growth. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell growth. A highly preferred embodiment of the invention

	antagonists of the invention) to   includes a method for	includes a method for
	promote or inhibit cell	stimulating endothelial cell
	proliferation, activation, and	proliferation. An alternative
	apoptosis. Exemplary assays	highly preferred embodiment
	for JNK and p38 kinase	of the invention includes a
	activity that may be used or	method for inhibiting
	routinely modified to test JNK	endothelial cell proliferation.
	and p38 kinase-induced	A highly preferred
	activity of polypeptides of the	embodiment of the invention
	invention (including antibodies	includes a method for
	and agonists or antagonists of	stimulating apoptosis of
	 the invention) include the	endothelial cells. An
	assays disclosed in Forrer et	alternative highly preferred
	al., Biol Chem 379(8-9):1101-	embodiment of the invention
	1110 (1998); Gupta et al., Exp	includes a method for
	Cell Res 247(2): 495-504	inhibiting (e.g., decreasing)
	(1999); Kyriakis JM, Biochem	apoptosis of endothelial cells.
	 Soc Symp 64:29-48 (1999);	A highly preferred
	Chang and Karin, Nature	embodiment of the invention
	410(6824):37-40 (2001); and	includes a method for
	Cobb MH, Prog Biophys Mol	stimulating (e.g., increasing)
	 Biol 71(3-4):479-500 (1999);	endothelial cell activation. An
	the contents of each of which	alternative highly preferred
	are herein incorporated by	embodiment of the invention
	 reference in its entirety.	includes a method for
	Endothelial cells that may be	inhibiting (e.g., decreasing) the
	used according to these assays	activation of and/or
	 are publicly available (e.g.,	inactivating endothelial cells.
	through the ATCC).	A highly preferred
	Exemplary endothelial cells	embodiment of the invention
	that may be used according to	includes a method for

=	helial cells   alternative highly preferred   embodiment of the invention		s, and are inhibiting angiogenesis. A			ar method for reducing cardiac	ar tone, hypertrophy. An alternative	ravasation. highly preferred embodiment	of the invention includes a	method for inducing cardiac	hypertrophy. Highly	preferred indications include	neoplastic diseases (e.g., as	described below under	"Hyperproliferative	Disorders"), and disorders of	the cardiovascular system	(e.g., heart disease, congestive	heart failure, hypertension,	aortic stenosis,	cardiomyopathy, valvular	regurgitation, left ventricular	dysfunction, atherosclerosis	and atherosclerotic vascular	disease, diabetic nephropathy,	intracardiac shunt, cardiac	hypertrophy, myocardial	infarction, chronic	homodimin original on 1/0"
these assays include human	umbilical vein endothelial cells (HIVEC) which are	endothelial cells which line	venous blood vessels, and are	involved in functions that	include, but are not limited to,	angiogenesis, vascular	permeability, vascular tone,	and immune cell extravasation.																				_	

	as described below under
	"Cardiovascular Disorders").
	Highly preferred indications
	include cardiovascular,
	endothelial and/or angiogenic
	disorders (e.g., systemic
 	disorders that affect vessels
	such as diabetes mellitus, as
 	well as diseases of the vessels
	themselves, such as of the
	arteries, capillaries, veins
	and/or lymphatics). Highly
	preferred are indications that
	stimulate angiogenesis and/or
	cardiovascularization. Highly
	preferred are indications that
	inhibit angiogenesis and/or
	cardiovascularization.
	Highly preferred indications
	include antiangiogenic activity
	to treat solid tumors,
	leukemias, and Kaposi"s
	sarcoma, and retinal disorders.
	Highly preferred indications
	include neoplasms and cancer,
 	such as, Kaposi"s sarcoma,
	hemangioma (capillary and
	cavernous), glomus tumors,
	telangiectasia, bacillary
	angiomatosis,
	hemanoioendothelioma

angiosarcoma, haemangiopericytoma, lymphangioma, lymphangiosarcoma. Highly preferred indications also	include cancers such as, prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Preferred	indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Hiohly preferred indications	also include arterial disease, such as, atherosclerosis, hypertension, coronary artery disease, inflammatory vasculitides, Reynaud"s disease and Reynaud"s	phenomenom, aneurysms, restenosis; venous and lymphatic disorders such as thrombophlebitis, lymphangitis, and lymphedema; and other vascular disorders such as	peripheral vascular disease, and cancer. Highly

include trauma su wounds, burns, at tissue (e.g., wascu such as, injury re balloon angiophar atheroschlerotic I implant fixation, ischemia reperfus repertual repertua			preferred indications also
wounds, burns, an tissue (e.g., vascusuchas, nijuly ver balloon angioplas atheroschlerotic limplant fixation, isohemia reperfur theumatoid arthin cerebrovascular ce diseases such as a failure, and osteo Additional highly indications incluure, and coagulative, and coagulative, lymplastic and related maculation and related coagulation indications inclument valve disease.  Preferred indication indication indication indication indications inclument valve disease.			include trauma such as
tissue (e.g., vascusuch as, injury reballoon angiopha atheroschleroite I implant fixation, ischemia reperflur rheumatoid arthricecerbrovascular cerebrovascular degeneration on cerebrovascular disease, car heart valve disease.  Preferred indication indication indication indication indication indication indication indication indication indication.			wounds, burns, and injured
such as, injury re balloon angiopha alteroschleroite1 implant fixation, ischemia reperflut rheumatoid arthri cerebrovascular c diseases such as a failure, and osteo Additional highly indications inclut graft rejection, di other retinopathic and coagulative c vascularitis, lymt angiogenesis, sex age-related macu degeneration, and Additional highly indications inclut heart disease, car heart valve disease referred indication			tissue (e.g., vascular injury
adheroschlerotic limplant fragion, ischemia reperfus rheumatoid arthric cerebrovascular c diseases such as a failure, and osteo Additional highly indications include graft rejection, di other retinopathic and coagulative c vascularitis, lymp angiogenesis, sea age-related meau degeneration, and / prevention of en and related condi Additional highly indications include heart valve disease, preferred indication sinclude in the failure of the conditional highly indications include heart valve disease.	_		such as, injury resulting from
implant fixation, ischemia reperfur heumatoid arthri cerebrovascular chiesaes such as a failure, and osteo Additional highly indications inclur graft rejection, di other retinopathic and coagulative of vascularitis, lynny angiogenesis, sex age-related macu degeneration, and / prevention of en and related condidational highly indications inclure heart disease, car heart valve disease, preferred nidication incluring in the coagularities and related condidational highly indications inclure heart disease, ear heart valve disease.			balloon angioplasty, and
implant fixation, ischemia reperfur hreumatoid arthri cerebrovascular of diseases such as a failure, and ostoo Additional highly indications inclur graft rejection, di other retinopathic and coagulative of vascularitis. Jurn angiogenesis, sex age-related macu degeneration, and prevention of en and related conditional highly indications inclure heart disease, cere heart valve disease, preferred nidication inclured preferred nidications inclured between the coagular disease.		-	atheroschlerotic lesions),
ischemia reperfus rheumatoid arthri cerebrovascular d diseases such as g failure, and osteo Additional highly indications inclut graft rejection, di other retinopathic and coagulative o vascularitis, Jvm angiogenesis, sex age-related macu degeneration, and fprevention of en and related condi Additional highly indications inclut heart disease, car heart valve disease vascular disease, p Preferred indicati			implant fixation, scarring,
rheumatoid arthri cerebrovascular d diseases such as a failure, and osteo Additional highly indications inclu graft rejection, di other retinopathic and coagulative o vascularitis, lymp angiogenesis, sex age-related macu degeneration, and //prevention of en and related condi Additional highly indications inclu heart disease, car heart valve disease vascular disease.			ischemia reperfusion injury,
cerebrovascular d diseases such as a failure, and osteo Additional highly indications incluc graft rejection, di other retinopathic and coagulative of vascularitis, lymp angiogenesis, sex age-related macu degeneration, and /prevention of en and related condi Additional highly indications incluc heart disease, car heart valve disease, vascular disease,			rheumatoid arthritis,
diseases such as a failure, and osteo Additional highly indications incluc graft rejection, di other retinopathic and coagulative of vascularitis, lymp angiogenesis, sex age-related macu degeneration, and (prevention of en and related condil Additional highly indications incluc heart valve disease, car heart valve disease, vascular disease, car heart valve disease.			cerebrovascular disease, renal
failure, and osteo Additional highly indications incluc graft rejection, di other retinopathic and coagulative of vascularitis, lymy angiogenesis, sex age-related macu degeneration, and //prevention of en and related condi Additional highly indications incluc heart valve disease, car heart valve disease, referred indicati			diseases such as acute renal
Additional highly indications incluc graft rejection, di other retinopathic and coagulative di vascularitis, lymp angiogenesis, sex age-related macu degeneration, and //prevention of en and related condi Additional highly indications incluc heart disease, car heart valve disease, vascular disease.  Preferred indication in the first conditional highly indications incluc heart valve disease.  Preferred indication in the first conditional preferred indications in the first conditional preferre			failure, and osteoporosis.
indications includ graft rejection, di other retinopathie and coagulative di vascularitis, lymp angiogenesis, sex age-related macu degeneration, and prevention of en and related condi and related condi indications includ heart disease, car heart disease, car heart valve disease.  Preferred indications includential in the first of the first o			Additional highly preferred
graft rejection, di other retinopathie and coagulative of vascularitis, lymp angiogenesis, sex age-related macu degeneration, and /prevention of en and related condi Additional highly indications inclue heart disease, car heart valve disease, vascular disease, Preferred indicati			indications include stroke,
other retinopathic and coagulative d vascularitis, lymp angiogenesis, sex age-related macu degeneration, and /prevention of en and related condi Additional highly indications incluu heart disease, car heart valve diseas vascular disease.  Preferred indicati	 		graft rejection, diabetic or
and coagulative d vascularitis, lymp angiogenesis, sex age-related macu degeneration, an /prevention of en and related condi Additional highly indications inclut heart disease, car heart valve diseas vascular disease. Preferred indicati			other retinopathies, thrombotic
vascularitis, lympangogenesis, sexage-related macu degeneration, and /prevention of en and related condi Additional highly indications incluc heart disease, car heart valve disease, vascular disease. Preferred indications in the disease.			and coagulative disorders,
angiogenesis, sex age-related macu degeneration, and /prevention of en and related condi Additional highly indications incluc heart disease, car heart valve disease vascular disease. Preferred indicati			vascularitis, lymph
age-related macu degeneration, and /prevention of en and related condi Additional highly indications inclus heart disease, car heart valve disease, vascular disease. Preferred indications in the disease.			angiogenesis, sexual disorders,
degeneration, and /prevention of en and related condi Additional highly indications includ heart disease, car heart valve disease vascular disease. Preferred indications in the conditional highly indications included in the conditional highly indications in the conditional highly indications in the conditional highly indicated ind			age-related macular
/prevention of en and related condi Additional highly indications incluc heart disease, car heart valve disease. Preferred indications in the search was considered indications in the search of the search was considered indications.			degeneration, and treatment
and related condi Additional highly indications inclue heart disease, car heart valve diseas vascular disease. Preferred indicati	 		/prevention of endometriosis
Additional highly indications includ heart disease, car heart valve disease vascular disease. Preferred indications in the control of the con			and related conditions.
indications includ heart disease, car heart valve disease, vascular disease. Preferred indications in the contract of the cont	 -		Additional highly preferred
heart disease, car heart valve diseas vascular disease. Preferred indicati			indications include fibromas,
heart valve disease vascular disease.  Preferred indicati			heart disease, cardiac arrest,
vascular disease.  Preferred indicati			heart valve disease, and
Preferred indicati			vascular disease.
			Preferred indications include
DIOOD DISOIDETS (			blood disorders (e.g., as

described below under "Immune Activity", "Blood- Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Additional preferred indications include inflammatory disorders (such as acute and chronic inflammatory diseases, e.g., inflammatory bowel disease and Crohn's disease), and pain management.	50 \$3
	Reporter Assay: construct contains regulatory and coding sequence of squalene synthetase, the first specific enzyme in the cholesterol biosynthetic pathway. See Jiang, et al., J. Biol. Chem. 268:12818-128241(993), the contents of which are herein incorporated by reference in its entirety. Cells were treated
	Inhibition of squalene synthetase gene transcription.
	1373
	H0GCK20
2555	425

	r Preferred embodiments of the invention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of asthma, allergy, hypersensitivity and inflammation.
with SID supernatants, and SEAP activity was measured after 72 hours. HepG2 is a human hepatocellular carcinoma cell line (ATCC HB-8065). See Knowles et al., Science. 209:497-9 (1980), the contents of which are herein incorporated by reference in its entirety.	Caspase Apoptosis. Assays for caspase apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate caspase protease-mediated apoptosis in immune cells (such as, for example, in mast cells). Mast cells are found in connective and mucosal tissues throughout the body, and their activation via immunoglobulin E - antigen, promoted by T helper cell type 2 cytokines, is an important component of allergic disease. Dysregulation of mast cell apoptosis may
	Regulation of apoptosis of immune cells (such as mast cells).
	1373
	HOGCK20
	425

play a role in allergic disease	and mast cell tumor survival.	Exemplary assays for caspase	apoptosis that may be used or	routinely modified to test	capase apoptosis activity	induced by polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) include the	assays disclosed in: Masuda A,	et al., J Biol Chem,	276(28):26107-26113 (2001);	Yeatman CF 2nd, et al., J Exp	Med, 192(8):1093-1103	(2000);Lee et al., FEBS Lett	485(2-3): 122-126 (2000); Nor	et al., J Vasc Res 37(3): 209-	218 (2000); and Karsan and	Harlan, J Atheroscler Thromb	3(2): 75-80 (1996); the	contents of each of which are	herein incorporated by	reference in its entirety.	Immune cells that may be used	according to these assays are	publicly available (e.g.,	through commercial sources).	Exemplary immune cells that	may be used according to these	assavs include mast cells such
												-													•					
							_																							

HOGCK20 HOGCK63	7K20 7K63 7K63	1373 1373 1374	IL-10 in Human T- cell 2B9 SEAP in OE-33 SEAP in HepG2/Squale- synthetase(stimulati on) Production of	line. Assays for measuring	Preferred embodiments of the invention include using
			ICAM-1	expression of ICAM-1 are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate ICAM-1 expression. Exemplary assays that may be used or routinely modified to measure ICAM-1 expression include assays disclosed in: Takacs P, et al, FASEB J, 15(2):279-281 (2001); and, Miyamoto K, et al., Am J Pathol, 156(5):1733-1739 (2000), the contents of each of which is herein incorporated by reference in its entirety. Cells that may be	mvention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of Inflammation, Vascular Disease, Athereosclerosis, Restenosis, and Stroke

used according to these assays are publicly available (e.g., through the ATCC) and/or may be routinely generated. Exemplary cells that may be used according to these assays include microvascular endothelial cells (MVEC).			RANTES FMAT. Assays for immunomodulatory proteins that induce chemotaxis of T cells, monocytes, and eosinophils are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate immunomodulation, induce chemotaxis, and/or mediate humoral or cellmediated immunity.  Exemplary assays that test for immunomodulatory proteins
	SEAP in HepG2/Squale- synthetase(stimulati on)	IL-2 in Human T cells	Production of RANTES in endothelial cells (such as human umbilical vein endothelial cells (HUVEC))
	1375	1375	1375
	HOGCS52	HOGCS52	HOGCS52
	427	427	2559

evaluate the production of	cytokines, such as RANTES,	and the induction of	chemotactic responses in	immune cells. Such assays	that may be used or routinely	modified to test	immunomodulatory activity of	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include the assays	disclosed in Miraglia et al., J	Biomolecular Screening 4:193-	204 (1999); Rowland et al.,	"Lymphocytes: a practical	approach" Chapter 6:138-160	(2000): Cocchi et al., Science	270(5243):1811-1815 (1995);	and Robinson et al., Clin Exp	Immunol 101(3):398-407	(1995), the contents of each of	which are herein incorporated	by reference in its entirety.	Endothelial cells that may be	used according to these assays	are publicly available (e.g.,	through the ATCC).	Exemplary endothelial cells	that may be used according to	these assays include human

umbilical vein endothelial cells  (HUVEC), which are endothelial cells which line venous blood vessels, and are involved in functions that include, but are not limited to, and immune cells carravasation.  Activation of transcription through the include inflammation and transcription transcription through the art and may limmune cells (such as T-cells)  PASSAYS for the activation of include inflammation and immune cells (such as T-cells)  PASSAYS for the activation of include inflammation and immune cells (such as T-cells)  PASSAYS for the activation of include and may limmune Activity", "Blood- (including antibodies and assess the ability of assess the ability of assess the ability of activascular Disorders").  Invention) to regulate NFKB  PExemplary assays for transcription through the immunodiciencies (e.g., rheumatoid arthritis, immunomodulatory genes.  Exemplary assays for transcription through the immunodiciencies (e.g., steemplary assays for transcription through the immunodiciencies (e.g., as may be used or rountinely modified to test NFKB- response element activity of indications is infection (e.g., polypeptides of the invention AlDS, and/or an infectious (including antibodies and described below). An onlypeptides of the invention disease as described below (including antibodies and ditional highly preferred response element activity of indication is infectious (including antibodies and ditional highly preferred response element activity of indications and electrical and infectious (including antibodies and diseases and electrical and including antibodies and described below). An onlypeptides of the invention disease as described below displays and properties of the invention disease as described below.
HOGCS52

 		invention) include assays	Highly preferred indications
		disclosed in Berger et al., Gene	include neoplastic diseases
		66:1-10 (1998); Cullen and	(e.g., melanoma, leukemia,
		Malm, Methods in Enzymol	lymphoma, and/or as described
		216:362-368 (1992); Henthorn	below under
		et al., Proc Natl Acad Sci USA	"Hyperproliferative
		85:6342-6346 (1988); Black et	Disorders"). Highly preferred
		al., Virus Gnes 15(2):105-117	indications include neoplasms
		(1997); and Fraser et al.,	and cancers, such
		29(3):838-844 (1999), the	as,melanoma, renal cell
		contents of each of which are	carcinoma, leukemia,
 		herein incorporated by	lymphoma, and prostate,
		reference in its entirety. T	breast, lung, colon, pancreatic,
		cells that may be used	esophageal, stomach, brain,
-		according to these assays are	liver and urinary cancer. Other
		publicly available (e.g.,	preferred indications include
		through the ATCC).	benign dysproliferative
		Exemplary human T cells that	disorders and pre-neoplastic
		may be used according to these	conditions, such as, for
		assays include the SUPT cell	example, hyperplasia,
		line, which is a suspension	metaplasia, and/or dysplasia.
 		culture of IL-2 and IL-4	Preferred indications also
		responsive T cells.	include anemia, pancytopenia,
			leukopenia, thrombocytopenia,
			Hodgkin's disease, acute
			lymphocytic anemia (ALL),
			plasmacytomas, multiple
			myeloma, Burkitt's lymphoma,
			arthritis, AIDS,
			granulomatous disease,
	:		inflammatory bowel disease,

					sensis nellfronenia
					neutrophilia neoriasis
					hemorphilia hypercogeniation
					ilemophina, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					suppression of immune
					reactions to transplanted
					organs, asthma and allergy.
	HOHBB49	1376	Production of TNF	TNFa FMAT. Assays for	A highly preferred
428			alpha by dendritic	immunomodulatory proteins	embodiment of the invention
			cells	produced by activated	includes a method for
				macrophages, T cells,	inhibiting (e.g., decreasing)
				fibroblasts, smooth muscle,	TNF alpha production. An
				and other cell types that exert a	alternative highly preferred
				wide variety of inflammatory	embodiment of the invention
				and cytotoxic effects on a	includes a method for
				variety of cells are well known	stimulating (e.g., increasing)
				in the art and may be used or	TNF alpha production.
				routinely modified to assess	Highly preferred indications
				the ability of polypeptides of	include blood disorders (e.g.,
				the invention (including	as described below under
				antibodies and agonists or	"Immune Activity", "Blood-
				antagonists of the invention) to	Related Disorders", and/or
				mediate immunomodulation,	"Cardiovascular Disorders"),
				modulate inflammation and	Highly preferred indications
				cytotoxicity. Exemplary	include autoimmune diseases
				assays that test for	(e.g., rheumatoid arthritis,
				immunomodulatory proteins	systemic lupus erythematosis,
				evaluate the production of	Crohn"s disease, multiple
				cytokines such as tumor	sclerosis and/or as described
				necrosis factor alpha (TNFa),	below), immunodeficiencies

and the induction or inhibition	(e.g., as described below),
 of an inflammatory or	boosting a T cell-mediated
cytotoxic response. Such	immune response, and
assays that may be used or	suppressing a T cell-mediated
routinely modified to test	immune response. Additional
immunomodulatory activity of	highly preferred indications
polypeptides of the invention	include inflammation and
(including antibodies and	inflammatory disorders, and
agonists or antagonists of the	treating joint damage in
invention) include assays	patients with rheumatoid
disclosed in Miraglia et al., J	arthritis. An additional highly
Biomolecular Screening 4:193-	preferred indication is sepsis.
204(1999); Rowland et al.,	Highly preferred indications
"Lymphocytes: a practical	include neoplastic diseases
approach" Chapter 6:138-160	(e.g., leukemia, lymphoma,
(2000); Verhasselt et al., Eur J	and/or as described below
Immunol 28(11):3886-3890	under "Hyperproliferative
(1198); Dahlen et al., J	Disorders"). Additionally,
Immunol 160(7):3585-3593	highly preferred indications
(1998); Verhasselt et al., J	include neoplasms and
Immunol 158:2919-2925	cancers, such as, leukemia,
(1997); and Nardelli et al., J	lymphoma, melanoma, glioma
Leukoc Biol 65:822-828	(e.g., malignant glioma), solid
(1999), the contents of each of	tumors, and prostate, breast,
 which are herein incorporated	lung, colon, pancreatic,
by reference in its entirety.	esophageal, stomach, brain,
Human dendritic cells that may	liver and urinary cancer. Other
be used according to these	preferred indications include
 assays may be isolated using	benign dysproliferative
 techniques disclosed herein or	disorders and pre-neoplastic
otherwise known in the art.	conditions, such as, for

				Human dendritic cells are antigen presenting cells in	example, hyperplasia, metaplasia, and/or dysplasia.
	-			suspension culture, which,	Preferred indications include
				when activated by antigen	anemia, pancytopenia,
				and/or cytokines, initiate and	leukopenia, thrombocytopenia,
				upregulate T cell proliferation	Hodgkin's disease, acute
				and functional activities.	lymphocytic anemia (ALL),
	-				plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HOHBC68	1377	Activation of	Kinase assay. Kinase assays,	A highly preferred
429			Natural Killer Cell	for example an Elk-1 kinase	embodiment of the invention
			ERK Signaling	assay, for ERK signal	includes a method for
			Pathway.	transduction that regulate cell	stimulating natural killer cell
				proliferation or differentiation	proliferation. An alternative
				are well known in the art and	highly preferred embodiment

may be used or routinely	of the invention includes a
modified to assess the ability	method for inhibiting natural
of polypeptides of the	killer cell proliferation. A
invention (including antibodies	ss highly preferred embodiment
and agonists or antagonists of	of the invention includes a
the invention) to promote or	
inhibit cell proliferation,	
 activation, and differentiation.	. alternative highly preferred
Exemplary assays for ERK	
kinase activity that may be	includes a method for
used or routinely modified to	inhibiting natural killer cell
test ERK kinase-induced	differentiation. Highly
activity of polypeptides of the	preferred indications include
 invention (including antibodies	es   neoplastic diseases (e.g., as
 and agonists or antagonists of	described below under
the invention) include the	"Hyperproliferative
assays disclosed in Forrer et	Disorders"), blood disorders
 al., Biol Chem 379(8-9):1101-	- (e.g., as described below under
1110 (1998); Kyriakis JM,	"Immune Activity",
Biochem Soc Symp 64:29-48	"Cardiovascular Disorders",
(1999); Chang and Karin,	and/or "Blood-Related
Nature 410(6824):37-40	Disorders"), immune disorders
(2001); and Cobb MH, Prog	(e.g., as described below under
 Biophys Mol Biol 71(3-4):479-	
 500 (1999); the contents of	infections (e.g., as described
each of which are herein	below under "Infectious
incorporated by reference in its	ts Disease"). Preferred
entirety. Natural killer cells	indications include blood
that may be used according to	disorders (e.g., as described
these assays are publicly	below under "Immune
available (e.g., through the	Activity", "Blood-Related

IA]	ATCC). Exemplary natural	Disorders", and/or
	killer cells that may be used	"Cardiovascular Disorders")
308	according to these assays	Highly preferred indications
nii	include the human natural	include autoimmune diseases
Kil	killer cell lines (for example,	(e.g., rheumatoid arthritis,
Ż	NK-YT cells which have	systemic lupus erythematosis,
cyt	cytolytic and cytotoxic	multiple sclerosis and/or as
act	activity) or primary NK cells.	described below) and
		immunodeficiencies (e.g., as
		described below). Additional
		highly preferred indications
		include inflammation and
		inflammatory disorders.
		Highly preferred indications
		also include cancers such as,
		kidney, melanoma, prostate,
		breast, lung, colon, pancreatic,
		esophageal, stomach, brain,
		liver, urinary cancer,
		lymphoma and leukemias.
		Other preferred indications
		include benign dysproliferative
		disorders and pre-neoplastic
		conditions, such as, for
		example, hyperplasia,
		metaplasia, and/or dysplasia.
		Other highly preferred
		indications include,
		pancytopenia, leukopenia,
		leukemias, Hodgkin's disease,
		acute lymphocytic anemia

					(ALL), arthritis, asthma,
					AIDS, granulomatous disease,
-					inflammatory bowel disease,
_					sepsis, psoriasis, immune
	_				reactions to transplanted
					organs and tissues,
					endocarditis, meningitis, Lyme
					Disease, and allergies.
ЮН	HOHBY12	1378	Production of	Assays for measuring	Preferred embodiments of the
430			ICAM-1	expression of ICAM-1 are	invention include using
				well-known in the art and may	polypeptides of the invention
				be used or routinely modified	(or antibodies, agonists, or
				to assess the ability of	antagonists thereof) in
				polypeptides of the invention	detection, diagnosis,
				(including antibodies and	prevention, and/or treatment of
				agonists or antagonists of the	Vascular Disease,
				invention) to regulate ICAM-1	Atherosclerosis, Restenosis,
				expression. Exemplary assays	Stroke, and Asthma.
				that may be used or routinely	
				modified to measure ICAM-1	
				expression include assays	
				disclosed in: Rolfe BE, et al.,	
				Atherosclerosis, 149(1):99-110	
				(2000); Panettieri RA Jr, et al.,	
				J Immunol, 154(5):2358-2365	
				(1995); and, Grunstein MM, et	
-				al., Am J Physiol Lung Cell	
				Mol Physiol, 278(6):L1154-	
				L1163 (2000), the contents of	
				each of which is herein	
				incorporated by reference in its	

ssays 5., rr ed. be be uscle				includes a method for				of the invention includes a lity method for inhibiting	_		ts of   of the invention includes a	or   method for stimulating	adipocyte differentiation. An	tion.   alternative highly preferred	K embodiment of the invention	e includes a method for	d to inhibiting adipocyte
entirety. Cells that may be used according to these assays are publicly available (e.g., through the ATCC) and/or may be routinely generated. Exemplary cells that may be used according to these assays include Aortic Smooth Muscle Cells (AOSMC); such as bovine AOSMC.			Kinase assay. Kinase assays,	assay, for ERK signal		proliferation or differentiation	are well known in the art and	may be used or routinely modified to assess the ability	of polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) to promote or	inhibit cell proliferation,	activation, and differentiation.	Exemplary assays for ERK	kinase activity that may be	used or routinely modified to
	IL-2 in Human T- cell 2B9	TNFa in Human T-cell 2B9	Activation of	Adipocyte EKN   Signaling Pathway													
	1378	1378	1379		_												
	HOHBY12	HOHBY12	HOHBY44														
	430	430	131	431													

tes	test ERK kinase-induced	differentiation. A highly
act	activity of polypeptides of the	preferred embodiment of the
vui	invention (including antibodies	invention includes a method
an	and agonists or antagonists of	for stimulating (e.g.,
the	the invention) include the	increasing) adipocyte
ass	assays disclosed in Forrer et	activation. An alternative
al.	al., Biol Chem 379(8-9):1101-	highly preferred embodiment
11	1110 (1998); Le Marchand-	of the invention includes a
Br	Brustel Y, Exp Clin	method for inhibiting the
En	Endocrinol Diabetes	activation of (e.g., decreasing)
10	107(2):126-132 (1999);	and/or inactivating adipocytes.
Ky	Kyriakis JM, Biochem Soc	Highly preferred indications
Sy	Symp 64:29-48 (1999); Chang	include endocrine disorders
an	and Karin, Nature	(e.g., as described below under
41	410(6824):37-40 (2001); and	"Endocrine Disorders").
20	Cobb MH, Prog Biophys Mol	Highly preferred indications
Bi	Biol 71(3-4):479-500 (1999);	also include neoplastic
the	the contents of each of which	diseases (e.g., lipomas,
are	are herein incorporated by	liposarcomas, and/or as
ref	reference in its entirety.	described below under
M	Mouse adipocyte cells that	"Hyperproliferative
m	may be used according to these	Disorders"). Preferred
ass	assays are publicly available	indications include blood
(e.	(e.g., through the ATCC).	disorders (e.g., hypertension,
EX	Exemplary mouse adipocyte	congestive heart failure, blood
93	cells that may be used	vessel blockage, heart disease,
300	according to these assays	stroke, impotence and/or as
oui e	include 3T3-L1 cells. 3T3-L1	described below under
SI	s an adherent mouse	"Immune Activity",
pre	preadipocyte cell line that is a	"Cardiovascular Disorders",
03	continuous substrain of 3T3	and/or "Blood-Related

fibroblast cells developed	Disorders"), immune disorders
 through clonal isolation and	(e.g., as described below under
undergo a pre-adipocyte to	"Immune Activity"), neural
adipose-like conversion under	disorders (e.g., as described
appropriate differentiation	below under "Neural Activity
conditions known in the art.	and Neurological Diseases"),
	and infection (e.g., as
	described below under
	"Infectious Disease").
	A highly preferred indication
- 11-	is diabetes mellitus. An
	additional highly preferred
	indication is a complication
	associated with diabetes (e.g.,
	diabetic retinopathy, diabetic
	nephropathy, kidney disease
	(e.g., renal failure,
	nephropathy and/or other
	diseases and disorders as
	described in the "Renal
	Disorders" section below),
	diabetic neuropathy, nerve
	disease and nerve damage
	(e.g., due to diabetic
	neuropathy), blood vessel
	blockage, heart disease, stroke,
	impotence (e.g., due to diabetic
-	neuropathy or blood vessel
	blockage), seizures, mental
	confusion, drowsiness,
	nonketotic hyperglycemic-

		hynerosmolar coma
		conditional or disease (a a
		calulty asculat uiscase (e.g.,
		heart disease, atherosclerosis,
		microvascular disease,
 _		hypertension, stroke, and other
-		diseases and disorders as
-		described in the
		"Cardiovascular Disorders"
_		section below), dyslipidemia,
		endocrine disorders (as
		described in the "Endocrine
		Disorders" section below),
		neuropathy, vision impairment
		(e.g., diabetic retinopathy and
		blindness), ulcers and impaired
 _		wound healing, infection (e.g.,
		infectious diseases and
		disorders as described in the
		"Infectious Diseases" section
		below (particularly of the
		urinary tract and skin). An
		additional highly preferred
 		indication is obesity and/or
		complications associated with
		obesity. Additional highly
		preferred indications include
		weight loss or alternatively,
 -		weight gain. Additional
		highly preferred indications are
		complications associated with
		insulin resistance.

					metaplasia, and/or dysplasia.
432	HOHCC74	1380	IL-6 in HUVEC		
	HOHCC74	1380	Activation of	Kinase assay. Kinase assays,	A highly preferred
432			Natural Killer Cell	for example an Elk-1 kinase	embodiment of the invention
			ERK Signaling	assay, for ERK signal	includes a method for
	-		Pathway.	transduction that regulate cell	stimulating natural killer cell
				proliferation or differentiation	proliferation. An alternative
				are well known in the art and	highly preferred embodiment
	-			may be used or routinely	of the invention includes a
				modified to assess the ability	method for inhibiting natural
				of polypeptides of the	killer cell proliferation. A
-				invention (including antibodies	highly preferred embodiment
				and agonists or antagonists of	of the invention includes a
				the invention) to promote or	method for stimulating natural
				inhibit cell proliferation,	killer cell differentiation. An
	-			activation, and differentiation.	alternative highly preferred
				Exemplary assays for ERK	embodiment of the invention
				kinase activity that may be	includes a method for
				used or routinely modified to	inhibiting natural killer cell
				test ERK kinase-induced	differentiation. Highly
				activity of polypeptides of the	preferred indications include
				invention (including antibodies	neoplastic diseases (e.g., as
				and agonists or antagonists of	described below under
				the invention) include the	"Hyperproliferative
				assays disclosed in Forrer et	Disorders"), blood disorders
				al., Biol Chem 379(8-9):1101-	(e.g., as described below under
				[ 1110 (1998); Kyriakis JM,	"Immune Activity",
				Biochem Soc Symp 64:29-48	"Cardiovascular Disorders",
				(1999); Chang and Karin,	and/or "Blood-Related
				Nature 410(6824):37-40	Disorders"), immune disorders

(2001)	(2001); and Cobb MH, Prog	(e.g., as described below under
Bionhy	-6/	"Immune Activity") and
500 (1)	500 (1999); the contents of	infections (e.g., as described
each o	each of which are herein	below under "Infectious
incorp	incorporated by reference in its	Disease"). Preferred
entiret	entirety. Natural killer cells	indications include blood
that ma	that may be used according to	disorders (e.g., as described
these a	these assays are publicly	below under "Immune
availab	available (e.g., through the	Activity", "Blood-Related
ATCC	ATCC). Exemplary natural	Disorders", and/or
killer c	killer cells that may be used	"Cardiovascular Disorders").
accord	according to these assays	Highly preferred indications
include	include the human natural	include autoimmune diseases
killer c	killer cell lines (for example,	(e.g., rheumatoid arthritis,
NK-Y	NK-YT cells which have	systemic lupus erythematosis,
cytolyt	cytolytic and cytotoxic	multiple sclerosis and/or as
activity	activity) or primary NK cells.	described below) and
		immunodeficiencies (e.g., as
		described below). Additional
		highly preferred indications
		include inflammation and
		inflammatory disorders.
		Highly preferred indications
		also include cancers such as,
		kidney, melanoma, prostate,
		breast, lung, colon, pancreatic,
		esophageal, stomach, brain,
		liver, urinary cancer,
		lymphoma and leukemias.
		Other preferred indications
		include benign dysproliferative

	for transcription through the	Disorders" and/or
	CDE that may be used on	"Conditional or Disordona"
 	one that may be used of	Caldiovasculal Disolders ),
	routinely modified to test SRE	Highly preferred indications
	activity of the polypeptides of	include autoimmune diseases
	the invention (including	(e.g., rheumatoid arthritis,
	antibodies and agonists or	systemic lupus erythematosis,
	antagonists of the invention)	Crohn"s disease, multiple
	include assays disclosed in	sclerosis and/or as described
	Berger et al., Gene 66:1-10	below), immunodeficiencies
	(1998); Cullen and Malm,	(e.g., as described below),
	Methods in Enzymol 216:362-	boosting a T cell-mediated
	368 (1992); Henthorn et al.,	immune response, and
	Proc Natl Acad Sci USA	suppressing a T cell-mediated
	85:6342-6346 (1988); and	immune response. Additional
	Black et al., Virus Genes	highly preferred indications
	12(2):105-117 (1997), the	include inflammation and
	content of each of which are	inflammatory disorders, and
	herein incorporated by	treating joint damage in
	reference in its entirety. T	patients with rheumatoid
	cells that may be used	arthritis. An additional highly
	according to these assays are	preferred indication is sepsis.
	publicly available (e.g.,	Highly preferred indications
	through the ATCC).	include neoplastic diseases
	Exemplary mouse T cells that	(e.g., leukemia, lymphoma,
	may be used according to these	and/or as described below
	assays include the CTLL cell	under "Hyperproliferative
	line, which is an IL-2	Disorders"). Additionally,
	dependent suspension culture	highly preferred indications
	of T cells with cytotoxic	include neoplasms and
	activity.	cancers, such as, for example,
		leukemia, lymphoma,

	malignant glioma), solid tumors, and prostate, breast,
	tumors, and prostate, breast,
	lung, colon, pancreatic,
	esophageal, stomach, brain,
_	liver and urinary cancer. Other
	preferred indications include
	benign dysproliferative
	disorders and pre-neoplastic
	conditions, such as, for
	example, hyperplasia,
	metaplasia, and/or dysplasia.
	Preferred indications include
	anemia, pancytopenia,
	leukopenia, thrombocytopenia,
	Hodgkin's disease, acute
	lymphocytic anemia (ALL),
	plasmacytomas, multiple
	myeloma, Burkitt's lymphoma,
	arthritis, AIDS, granulomatous
	disease, inflammatory bowel
	disease, neutropenia,
	neutrophilia, psoriasis,
	suppression of immune
	reactions to transplanted
	organs and tissues,
	hemophilia, hypercoagulation,
	diabetes mellitus, endocarditis,
	meningitis, Lyme Disease,
	cardiac reperfusion injury, and
	asthma and allergy. An

					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HONAH29	1382	Activation of	This reporter assay measures	Highly preferred indications
434			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the GATA3 response	Preferred indications also
				element are well-known in the	include blood disorders (e.g.,
				art and may be used or	as described below under
				routinely modified to assess	"Immune Activity", "Blood-
				the ability of polypeptides of	Related Disorders", and/or
				the invention (including	"Cardiovascular Disorders").
				antibodies and agonists or	Preferred indications include
				antagonists of the invention) to	autoimmune diseases (e.g.,
				regulate GATA3 transcription	rheumatoid arthritis, systemic
				factors and modulate	lupus erythematosis, multiple
				expression of mast cell genes	sclerosis and/or as described
				important for immune response	below) and
				development. Exemplary	immunodeficiencies (e.g., as
				assays for transcription	described below). Preferred
				through the GATA3 response	indications include neoplastic
				element that may be used or	diseases (e.g., leukemia,
				routinely modified to test	lymphoma, melanoma,
				GATA3-response element	prostate, breast, lung, colon,

		activity of nolvnentides of the	nancreatic esonbageal
		invention finding antihodise	etomoch brain livor and
		Invention (including antibodies	Stomach, Diam, nver, and
		and agonists or antagonists of	urinary tract cancers and/or as
		the invention) include assays	described below under
		disclosed in Berger et al., Gene	"Hyperproliferative
		66:1-10 (1998); Cullen and	Disorders"). Other preferred
		Malm, Methods in Enzymol	indications include benign
		216:362-368 (1992); Henthorn	dysproliferative disorders and
		et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
		85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
		et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
		Quant Biol 64:563-571 (1999);	Preferred indications include
		Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
		J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
		(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
		Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
		Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
		14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
		contents of each of which are	lymphoma, arthritis, AIDS,
		herein incorporated by	granulomatous disease,
		reference in its entirety. Mast	inflammatory bowel disease,
		cells that may be used	sepsis, neutropenia,
		according to these assays are	neutrophilia, psoriasis,
		publicly available (e.g.,	suppression of immune
-		through the ATCC).	reactions to transplanted
		Exemplary human mast cells	organs and tissues, hemophilia,
		that may be used according to	hypercoagulation, diabetes
		these assays include the HMC-	mellitus, endocarditis,
		1 cell line, which is an	meningitis, and Lyme Disease.
		immature human mast cell line	
	; ; ;	established from the peripheral	

				blood of a patient with mast cell leukemia, and exhibits	
:				many characteristics of immature mast cells.	
	HONAH29	1382	Activation of	This reporter assay measures	Highly preferred indications
434			transcription	activation of the NFAT	include allergy, asthma, and
			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the Nuclear Factor of	Preferred indications also
				Activated T cells (NFAT)	include blood disorders (e.g.,
				response element are well-	as described below under
				known in the art and may be	"Immune Activity", "Blood-
				used or routinely modified to	Related Disorders", and/or
				assess the ability of	"Cardiovascular Disorders").
		···-		polypeptides of the invention	Preferred indications include
				(including antibodies and	autoimmune diseases (e.g.,
				agonists or antagonists of the	rheumatoid arthritis, systemic
				invention) to regulate NFAT	lupus erythematosis, multiple
				transcription factors and	sclerosis and/or as described
				modulate expression of genes	below) and
				involved in	immunodeficiencies (e.g., as
				immunomodulatory functions.	described below). Preferred
				Exemplary assays for	indications include neoplastic
				transcription through the	diseases (e.g., leukemia,
				NFAT response element that	lymphoma, melanoma,
				may be used or routinely	prostate, breast, lung, colon,

	u	modified to test NFAT-	pancreatic, esophageal,
	<u></u>	response element activity of	stomach, brain, liver, and
	ď	polypeptides of the invention	urinary tract cancers and/or as
		(including antibodies and	described below under
	8	agonists or antagonists of the	"Hyperproliferative
_		invention) include assays	Disorders"). Other preferred
	P	disclosed in Berger et al., Gene	indications include benign
	9	66:1-10 (1998); Cullen and	dysproliferative disorders and
		Malm, Methods in Enzymol	pre-neoplastic conditions, such
	2	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
	<u> </u>	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	<u>∞</u>	85:6342-6346 (1988); De Boer	Preferred indications include
	9	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
•	3	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
	<u> </u>	et al., J Immunol	leukemias, Hodgkin's disease,
		165(12):7215-7223 (2000);	acute lymphocytic anemia
		Hutchinson and McCloskey, J	(ALL), plasmacytomas,
	Ш	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
		16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
	<u>a</u>	al., J Exp Med 188:527-537	granulomatous disease,
		(1998), the contents of each of	inflammatory bowel disease,
	^	which are herein incorporated	sepsis, neutropenia,
	<u>q</u>	by reference in its entirety.	neutrophilia, psoriasis,
	<u> </u>	Mast cells that may be used	suppression of immune
	B	according to these assays are	reactions to transplanted
	<u>d</u>	publicly available (e.g.,	organs and tissues, hemophilia,
	T F	through the ATCC).	hypercoagulation, diabetes
	<u>ш</u>	Exemplary human mast cells	mellitus, endocarditis,
	Ŧ	that may be used according to	meningitis, and Lyme Disease.
	Ţ	these assays include the HMC-	
	1	I cell line, which is an	

				immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits	
				many characteristics of immature mast cells.	
	HOSDJ25	1383	Production of	Assays for measuring	Preferred embodiments of the
435			ICAM-1	expression of ICAM-1 are	invention include using
				well-known in the art and may	polypeptides of the invention
				be used or routinely modified	(or antibodies, agonists, or
				to assess the ability of	antagonists thereof) in
				polypeptides of the invention	detection, diagnosis,
				(including antibodies and	prevention, and/or treatment of
				agonists or antagonists of the	Vascular Disease,
				invention) to regulate ICAM-1	Atherosclerosis, Restenosis,
				expression. Exemplary assays	Stroke, and Asthma.
				that may be used or routinely	
				modified to measure ICAM-1	
				expression include assays	
				disclosed in: Rolfe BE, et al.,	
				Atherosclerosis, 149(1):99-110	
				(2000); Panettieri RA Jr, et al.,	
				J Immunol, 154(5):2358-2365	
				(1995); and, Grunstein MM, et	
				al., Am J Physiol Lung Cell	
				Mol Physiol, 278(6):L1154-	
				L1163 (2000), the contents of	
				each of which is herein	
				incorporated by reference in its	
				entirety. Cells that may be	
				used according to these assays	

		,		are publicly available (e.g., through the ATCC) and/or may be routinely generated. Exemplary cells that may be used according to these assays include Aortic Smooth Muscle Cells (AOSMC); such as bovine AOSMC.	
435	HOSDJ25	1383	SEAP in HIB/CRE		
435	HOSDJ25	1383	Activation of transcription through NFAT response element in immune cells (such as natural killer cells).	Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and modulate expression of genes involved in immunomodulatory functions. Exemplary assays for transcription through the NFAT response element that may be used or routinely	Highly preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below), boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications include
				response element activity of	inflammatory disorders. An

	polypeptides of the invention	additional highly preferred
	(including antibodies and	indication is infection (e.g., an
-	agonists or antagonists of the	infectious disease as described
	invention) include assays	below under "Infectious
-	disclosed in Berger et al., Gene	Disease"). Preferred
	66:1-10 (1998); Cullen and	indications include neoplastic
	Malm, Methods in Enzymol	diseases (e.g., leukemia,
	216:362-368 (1992); Henthorn	lymphoma, and/or as described
	et al., Proc Natl Acad Sci USA	below under
	85:6342-6346 (1988);	"Hyperproliferative
	Aramburu et al., J Exp Med	Disorders"). Preferred
	182(3):801-810 (1995); De	indications include neoplasms
	Boer et al., Int J Biochem Cell	and cancers, such as, for
	Biol 31(10):1221-1236 (1999);	example, leukemia, lymphoma,
	Fraser et al., Eur J Immunol	and prostate, breast, lung,
	29(3):838-844 (1999); and	colon, pancreatic, esophageal,
	Yeseen et al., J Biol Chem	stomach, brain, liver and
	268(19):14285-14293 (1993),	urinary cancer. Other preferred
	the contents of each of which	indications include benign
	are herein incorporated by	dysproliferative disorders and
	reference in its entirety. NK	pre-neoplastic conditions, such
	cells that may be used	as, for example, hyperplasia,
	according to these assays are	metaplasia, and/or dysplasia.
	publicly available (e.g.,	Preferred indications also
	through the ATCC).	include anemia, pancytopenia,
	Exemplary human NK cells	leukopenia, thrombocytopenia,
	that may be used according to	Hodgkin's disease, acute
	these assays include the NK-	lymphocytic anemia (ALL),
	YT cell line, which is a human	plasmacytomas, multiple
	natural killer cell line with	myeloma, Burkitt's lymphoma,
	cytolytic and cytotoxic	arthritis, AIDS, granulomatous

				activity.	disease, inflammatory bowel
					disease, sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					asthma and allergy.
	HOSDJ25	1383	Regulation of	Caspase Apoptosis. Assays	A highly preferred
435			apoptosis in	for caspase apoptosis are well	indication is diabetes mellitus.
			pancreatic beta	known in the art and may be	An additional highly preferred
			cells.	used or routinely modified to	indication is a complication
				assess the ability of	associated with diabetes (e.g.,
				polypeptides of the invention	diabetic retinopathy, diabetic
				(including antibodies and	nephropathy, kidney disease
				agonists or antagonists of the	(e.g., renal failure,
				invention) to promote caspase	nephropathy and/or other
				protease-mediated apoptosis.	diseases and disorders as
				Apoptosis in pancreatic beta is	described in the "Renal
				associated with induction and	Disorders" section below),
				progression of diabetes.	diabetic neuropathy, nerve
				Exemplary assays for caspase	disease and nerve damage
				apoptosis that may be used or	(e.g., due to diabetic
				routinely modified to test	neuropathy), blood vessel
				capase apoptosis activity of	blockage, heart disease, stroke,
				polypeptides of the invention	impotence (e.g., due to diabetic
				(including antibodies and	neuropathy or blood vessel
				agonists or antagonists of the	blockage), seizures, mental
				invention) include the assays	confusion, drowsiness,

disclosed in: Loweth, AC, et	nonketotic hyperglycemic-
 al., FEBS Lett, 400(3):285-8	hyperosmolar coma,
(1997); Saini, KS, et al.,	cardiovascular disease (e.g.,
Biochem Mol Biol Int,	heart disease, atherosclerosis,
39(6):1229-36 (1996);	microvascular disease,
Krautheim, A., et al., Br J	hypertension, stroke, and other
Pharmacol, 129(4):687-94	diseases and disorders as
(2000); Chandra J, et al.,	described in the
Diabetes, 50 Suppl 1:S44-7	"Cardiovascular Disorders"
(2001); Suk K, et al., J	section below), dyslipidemia,
Immunol, 166(7):4481-9	endocrine disorders (as
(2001); Tejedo J, et al., FEBS	described in the "Endocrine
Lett, 459(2):238-43 (1999);	Disorders" section below),
Zhang, S., et al., FEBS Lett,	neuropathy, vision impairment
455(3):315-20 (1999); Lee et	(e.g., diabetic retinopathy and
al., FEBS Lett 485(2-3): 122-	blindness), ulcers and impaired
126 (2000); Nor et al., J Vasc	wound healing, and infection
Res 37(3): 209-218 (2000);	(e.g., infectious diseases and
 and Karsan and Harlan, J	disorders as described in the
Atheroscler Thromb 3(2): 75-	"Infectious Diseases" section
80 (1996); the contents of each	below, especially of the
of which are herein	urinary tract and skin), carpal
incorporated by reference in its	tunnel syndrome and
entirety. Pancreatic cells that	Dupuytren's contracture).
may be used according to these	An additional highly preferred
assays are publicly available	indication is obesity and/or
(e.g., through the ATCC)	complications associated with
and/or may be routinely	obesity. Additional highly
generated. Exemplary	preferred indications include
pancreatic cells that may be	weight loss or alternatively,
used according to these assays	weight gain. Aditional

include RIN-m. RIN-m is a rat adherent pancreatic beta complications associated with cell insulinoma cell line derived from a radiation induced transplantable rat islet cell tumor. The cells produce and secrete islet polypeptide hormones, and produce insulin, somatostatin, and possibly glucagon. ATTC: #CRL-2057 Chick et al. Proc. Natl. Acad. Sci. 1980 77:3519.	Production of IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced participates and
	436 HOSEG51 1384 Produ

expression level is strongly	"Cardiovascular Disorders"),
regulated by cytokines, growth	and infection (e.g., as
factors, and hormones are well	described below under
known in the art and may be	"Infectious Disease"). Highly
used or routinely modified to	preferred indications include
assess the ability of	autoimmune diseases (e.g.,
polypeptides of the invention	rheumatoid arthritis, systemic
(including antibodies and	lupus erythematosis, multiple
agonists or antagonists of the	sclerosis and/or as described
invention) to mediate	below) and
immunomodulation and	immunodeficiencies (e.g., as
differentiation and modulate T	described below). Highly
cell proliferation and function.	preferred indications also
Exemplary assays that test for	include boosting a B cell-
 immunomodulatory proteins	mediated immune response
 evaluate the production of	and alternatively suppressing a
cytokines, such as IL-6, and	B cell-mediated immune
the stimulation and	response. Highly preferred
 upregulation of T cell	indications include
 proliferation and functional	inflammation and
activities. Such assays that	inflammatory
may be used or routinely	disorders.Additional highly
modified to test	preferred indications include
immunomodulatory and	asthma and allergy. Highly
diffferentiation activity of	preferred indications include
polypeptides of the invention	neoplastic diseases (e.g.,
 (including antibodies and	myeloma, plasmacytoma,
agonists or antagonists of the	leukemia, lymphoma,
 invention) include assays	melanoma, and/or as described
disclosed in Miraglia et al., J	below under
Biomolecular Screening 4:193-	"Hyperproliferative

Disorders"). Highly preferred	indications include neoplasms	and cancers, such as, myeloma,	plasmacytoma, leukemia,	lymphoma, melanoma, and	prostate, breast, lung, colon,	pancreatic, esophageal,	stomach, brain, liver and	urinary cancer. Other preferred	indications include benign	dysproliferative disorders and	pre-neoplastic conditions, such	as, for example, hyperplasia,	metaplasia, and/or dysplasia.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,	Hodgkin's disease, acute	lymphocytic anemia (ALL),	multiple myeloma, Burkitt's	lymphoma, arthritis, AIDS,	granulomatous disease,	inflammatory bowel disease,	sepsis, neutropenia,	neutrophilia, psoriasis,	suppression of immune	reactions to transplanted	organs and tissues,	hemophilia, hypercoagulation,	diabetes mellitus, endocarditis,	meningitis, and Lyme Disease.
204(1999); Rowland et al.,	"Lymphocytes: a practical	approach" Chapter 6:138-160	(2000); and Verhasselt et al., J	Immunol 158:2919-2925	(1997), the contents of each of	which are herein incorporated	by reference in its entirety.	Human dendritic cells that may	be used according to these	assays may be isolated using	techniques disclosed herein or	otherwise known in the art.	Human dendritic cells are	antigen presenting cells in	suspension culture, which,	when activated by antigen	and/or cytokines, initiate and	upregulate T cell proliferation	and functional activities.											
	_																-						-							
											-		_																	
												-																		

					An additonal preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
437	HOSFD58	1385	Activation of T-Cell p38 or JNK Signaling Pathway.	Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote or inhibit immune cell (e.g. T-cell) proliferation, activation, and apoptosis. Exemplary assays for JNK and p38 kinase activity that may be used or routinely modified to test JNK and p38 kinase-induced activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Forrer et al., Biol Chem 379(8-9):1101-1110	Preferred indications include neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), blood disorders (e.g., as described below under "Immune Activity", "Cardiovascular Disorders", and/or "Blood-Related Disorders"), and infection (e.g., an infectious disease as described below under "Infectious Disease"). Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Additional highly preferred indications include inflammatory disorders. Highly preferred indications

		Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
		Kyriakis JM, Biochem Soc	lymphoma, and/or as described
		Symp 64:29-48 (1999); Chang	below under
		and Karin, Nature	"Hyperproliferative
		410(6824):37-40 (2001); and	Disorders"). Highly preferred
		Cobb MH, Prog Biophys Mol	indications include neoplasms
		Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
		the contents of each of which	lymphoma, prostate, breast,
		are herein incorporated by	lung, colon, pancreatic,
		reference in its entirety. T	esophageal, stomach, brain,
		cells that may be used	liver, and urinary cancer. Other
		according to these assays are	preferred indications include
		publicly available (e.g.,	benign dysproliferative
		through the ATCC).	disorders and pre-neoplastic
		Exemplary mouse T cells that	conditions, such as, for
-		may be used according to these	example, hyperplasia,
		assays include the CTLL cell	metaplasia, and/or dysplasia.
		line, which is an IL-2	Preferred indications include
		dependent suspension-culture	arthritis, asthma, AIDS,
		cell line with cytotoxic	allergy, anemia, pancytopenia,
		activity.	leukopenia, thrombocytopenia,
			Hodgkin"s disease, acute
			lymphocytic anemia (ALL),
			plasmacytomas, multiple
			myeloma, Burkitt"s lymphoma,
			granulomatous disease,
			inflammatory bowel disease,
-			sepsis, psoriasis, suppression
			of immune reactions to
			transplanted organs and
			tissues, endocarditis,

					meningitis, and Lyme Disease.
0.7	HOUCQ17	1386	Activation of	Kinase assay. Kinase assays,	A highly preferred
438			Adipocyte EKK	tor example an Elk-1 kinase	embodiment of the invention
			Signaling Pathway	assay, for ERK signal	includes a method for
				transduction that regulate cell	stimulating adipocyte
				proliferation or differentiation	proliferation. An alternative
				are well known in the art and	highly preferred embodiment
				may be used or routinely	of the invention includes a
				modified to assess the ability	method for inhibiting
				of polypeptides of the	adipocyte proliferation. A
···				invention (including antibodies	highly preferred embodiment
				and agonists or antagonists of	of the invention includes a
				the invention) to promote or	method for stimulating
				inhibit cell proliferation,	adipocyte differentiation. An
				activation, and differentiation.	alternative highly preferred
				Exemplary assays for ERK	embodiment of the invention
				kinase activity that may be	includes a method for
				used or routinely modified to	inhibiting adipocyte
				test ERK kinase-induced	differentiation. A highly
				activity of polypeptides of the	preferred embodiment of the
				invention (including antibodies	invention includes a method
., .				and agonists or antagonists of	for stimulating (e.g.,
				the invention) include the	increasing) adipocyte
				assays disclosed in Forrer et	activation. An alternative
				al., Biol Chem 379(8-9):1101-	highly preferred embodiment
				1110 (1998); Le Marchand-	of the invention includes a
				Brustel Y, Exp Clin	method for inhibiting the
				Endocrinol Diabetes	activation of (e.g., decreasing)
				107(2):126-132 (1999);	and/or inactivating adipocytes.
				Kyriakis JM, Biochem Soc	Highly preferred indications
				Symp 64:29-48 (1999); Chang	include endocrine disorders

		and Karin. Nature	(e.g., as described below under
		410(6824):37-40 (2001); and	"Endocrine Disorders").
		Cobb MH, Prog Biophys Mol	Highly preferred indications
		Biol 71(3-4):479-500 (1999);	also include neoplastic
		the contents of each of which	diseases (e.g., lipomas,
		are herein incorporated by	liposarcomas, and/or as
		reference in its entirety.	described below under
		Mouse adipocyte cells that	"Hyperproliferative
		may be used according to these	Disorders"). Preferred
		assays are publicly available	indications include blood
		(e.g., through the ATCC).	disorders (e.g., hypertension,
		Exemplary mouse adipocyte	congestive heart failure, blood
		cells that may be used	vessel blockage, heart disease,
		according to these assays	stroke, impotence and/or as
		include 3T3-L1 cells. 3T3-L1	described below under
		is an adherent mouse	"Immune Activity",
		preadipocyte cell line that is a	"Cardiovascular Disorders",
		continuous substrain of 3T3	and/or "Blood-Related
		fibroblast cells developed	Disorders"), immune disorders
		through clonal isolation and	(e.g., as described below under
	_	undergo a pre-adipocyte to	"Immune Activity"), neural
		adipose-like conversion under	disorders (e.g., as described
		appropriate differentiation	below under "Neural Activity
		conditions known in the art.	and Neurological Diseases"),
-			and infection (e.g., as
			described below under
			"Infectious Disease").
			A highly preferred indication
			is diabetes mellitus. An
			additional highly preferred
			indication is a complication

_	associated with diadetes (e.g.,
	diabetic retinopathy, diabetic
 	 nephropathy, kidney disease
 	(e.g., renal failure,
	nephropathy and/or other
	diseases and disorders as
	described in the "Renal
	 Disorders" section below),
	diabetic neuropathy, nerve
	disease and nerve damage
	(e.g., due to diabetic
	neuropathy), blood vessel
 	 blockage, heart disease, stroke,
	 impotence (e.g., due to diabetic
	neuropathy or blood vessel
	blockage), seizures, mental
	confusion, drowsiness,
-	 nonketotic hyperglycemic-
	 hyperosmolar coma,
	cardiovascular disease (e.g.,
	 heart disease, atherosclerosis,
	microvascular disease,
	hypertension, stroke, and other
	 diseases and disorders as
	described in the
	 "Cardiovascular Disorders"
	section below), dyslipidemia,
	endocrine disorders (as
 -	described in the "Endocrine
	Disorders" section below),
 -	

	(e.g. diabetic retinonathy and
	blindness), ulcers and impaired
	wound healing, infection (e.g.,
	infectious diseases and
	disorders as described in the
	"Infectious Diseases" section
	below (particularly of the
	urinary tract and skin). An
	additional highly preferred
	indication is obesity and/or
	complications associated with
	obesity. Additional highly
	preferred indications include
	weight loss or alternatively,
	weight gain. Additional
	highly preferred indications are
	complications associated with
	insulin resistance.
	Additional highly preferred
	indications are disorders of the
	musculoskeletal systems
	including myopathies,
	muscular dystrophy, and/or as
	described herein.
	Additional highly preferred
	indications include,
	hypertension, coronary artery
	disease, dyslipidemia,
	gallstones, osteoarthritis,
	degenerative arthritis, eating
	disorders, fibrosis, cachexia,

and kidney diseases or disorders. Preferred indications include neoplasms and cancer, such as, lymphoma, leukemia and breast, colon, and kidney cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia.		Preferred embodiments of the invention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of asthma, allergy, hypersensitivity and inflammation.
		Kinase assays, for example an Elk-1 kinase assay for ERK signal transduction that regulates cell proliferation or differentiation, are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or
	SEAP in HIB/CRE	Regulation of proliferation and/or differentiation in immune cells (such as mast cells).
	1386	1386
	HOUCQ17	HOUCQ17
	438	438

antagonists of the invention) to promote or inhibit cell	proliferation, activation, and	differentiation. Exemplary	assays for EKK kinase activity that may be used or routinely	modified to test ERK kinase-	induced activity of	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include the assays	disclosed in: Ali H, et al., J	Immunol, 165(12):7215-7223	(2000); Tam SY, et al., Blood,	90(5):1807-1820 (1997);	Forrer et al., Biol Chem 379(8-	9):1101-1110 (1998); Berra et	al., Biochem Pharmacol	60(8):1171-1178 (2000);	Gupta et al., Exp Cell Res	247(2):495-504 (1999); Chang	and Karin, Nature	410(6824):37-40 (2001); and	Cobb MH, Prog Biophys Mol	Biol 71(3-4):479-500 (1999);	the contents of each of which	are herein incorporated by	reference in its entirety.	Exemplary immune cells that	may be used according to these
								-																				
													25			_												

				assays include human mast cells such as the HMC-1 cell line.	
438	HOUCQ17	1386	Activation of	This reporter assay measures	Highly preferred indications include alleroy asthma and
0			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the GATA3 response	Preferred indications also
				element are well-known in the	include blood disorders (e.g.,
				art and may be used or	as described below under
				routinely modified to assess	"Immune Activity", "Blood-
				the ability of polypeptides of	Related Disorders", and/or
				the invention (including	"Cardiovascular Disorders").
				antibodies and agonists or	Preferred indications include
				antagonists of the invention) to	autoimmune diseases (e.g.,
				regulate GATA3 transcription	rheumatoid arthritis, systemic
				factors and modulate	lupus erythematosis, multiple
				expression of mast cell genes	sclerosis and/or as described
				important for immune response	below) and
				development. Exemplary	immunodeficiencies (e.g., as
				assays for transcription	described below). Preferred
				through the GATA3 response	indications include neoplastic
				element that may be used or	diseases (e.g., leukemia,
				routinely modified to test	lymphoma, melanoma,
				GATA3-response element	prostate, breast, lung, colon,
				activity of polypeptides of the	pancreatic, esophageal,

	invention (including antibodies	stomach. brain, liver, and
	and agonists or antagonists of	urinary tract cancers and/or as
	the invention) include assays	described below under
 	disclosed in Berger et al., Gene	"Hyperproliferative
	66:1-10 (1998); Cullen and	Disorders"). Other preferred
	Malm, Methods in Enzymol	indications include benign
	216:362-368 (1992); Henthorn	dysproliferative disorders and
	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
 	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
	Quant Biol 64:563-571 (1999);	Preferred indications include
	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
	J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
	(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
	Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
	14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
	contents of each of which are	lymphoma, arthritis, AIDS,
	herein incorporated by	granulomatous disease,
-	reference in its entirety. Mast	inflammatory bowel disease,
	cells that may be used	sepsis, neutropenia,
	according to these assays are	neutrophilia, psoriasis,
	publicly available (e.g.,	suppression of immune
	through the ATCC).	reactions to transplanted
	Exemplary human mast cells	organs and tissues, hemophilia,
	that may be used according to	hypercoagulation, diabetes
	these assays include the HMC-	mellitus, endocarditis,
	1 cell line, which is an	meningitis, and Lyme Disease.
	immature human mast cell line	
	established from the peripheral	
	blood of a patient with mast	

ноисо17	1386 Activation of transcription		Highly preferred indications include allergy, asthma, and
	response element in immune cells (such as mast cells).	ment in human mast cell line.  s (such Activation of NFAT in mast cells has been linked to cells has been linked to cortokine and chemokine.	indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and
		production. Assays for the activation of transcription the Nuclear Factor of	inflammation and inflammatory disorders. Preferred indications also
		Activated T cells (NFAT) response element are well-	include blood disorders (e.g., as described below under
		used or routinely modified to assess the ability of polypeptides of the invention	Related Disorders", and/or "Cardiovascular Disorders").  Preferred indications include
		(including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and	autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described
		modulate expression of genes involved in immunomodulatory functions.	below) and immunodeficiencies (e.g., as described below). Preferred
		Exemplary assays for transcription through the NFAT response element that	indications include neoplastic diseases (e.g., leukemia, lymphoma, melanoma,
		may be used or routinely modified to test NFAT-	prostate, breast, lung, colon, pancreatic, esophageal,

response element activity of	stomach, brain, liver, and
polypeptides of the invention	urinary tract cancers and/or as
(including antibodies and	described below under
agonists or antagonists of the	"Hyperproliferative
 invention) include assays	Disorders"). Other preferred
disclosed in Berger et al., Gene	indications include benign
66:1-10 (1998); Cullen and	dysproliferative disorders and
 Malm, Methods in Enzymol	pre-neoplastic conditions, such
216:362-368 (1992); Henthorn	as, for example, hyperplasia,
 et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
 85:6342-6346 (1988); De Boer	Preferred indications include
et al., Int J Biochem Cell Biol	anemia, pancytopenia,
31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
et al., J Immunol	leukemias, Hodgkin's disease,
165(12):7215-7223 (2000);	acute lymphocytic anemia
Hutchinson and McCloskey, J	(ALL), plasmacytomas,
Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
al., J Exp Med 188:527-537	granulomatous disease,
(1998), the contents of each of	inflammatory bowel disease,
which are herein incorporated	sepsis, neutropenia,
by reference in its entirety.	neutrophilia, psoriasis,
Mast cells that may be used	suppression of immune
according to these assays are	reactions to transplanted
publicly available (e.g.,	organs and tissues, hemophilia,
through the ATCC).	hypercoagulation, diabetes
Exemplary human mast cells	mellitus, endocarditis,
that may be used according to	meningitis, and Lyme Disease.
these assays include the HMC-	
1 cell line, which is an	
immature human mast cell line	

established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.	Assays for the regulation (i.e. increases or decreases) of viability and proliferation of cells in vitro are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate viability and proliferation of pre-adipose cells and cell lines. For example, the CellTiter-Gloô Luminescent Cell Viability Assay (Promega Corp., Madison, WI, USA) can be used to measure the number of viable cells in culture based on quantitation of the ATP presence of metabolically active cells. 3T3-L1 is a mouse preadipocyte cell line. It is a continuous substrain of 3T3 fibroblast cells developed
	Proliferation of preadipose cells (such as 3T3-L1 cells)
	1386
	HOUCQ17
	438

through clonal isolation. Cells were differentiated to an adipose-like state before being used in the screen. See Green H and Meuth M., Cell 3: 127-133 (1974), which is herein incorporated by reference in its entirety.					RANTES FMAT. Assays for immunomodulatory proteins that induce chemotaxis of T cells, monocytes, and eosinophils are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate immunomodulation, induce chemotaxis, and/or mediate humoral or cell-mediated immunity.
	IgG in Human B cells SAC	IFNg in Human T- cell 2B9	IL-10 in Human T- cell 2B9	IL-6 in HUVEC	Production of RANTES in endothelial cells (such as human umbilical vein endothelial cells (HUVEC))
	1386	1386	1386	1386	1386
	НОИСФ17	HOUCQ17	HOUCQ17	HOUCQ17	HOUCQ17
	438	438	438	438	438

Exemplary assays that test for immunomodulatory proteins evaluate the production of cytokines, such as RANTES,	chemotactic responses in immune cells. Such assays that may be used or routinely modified to test immunomodulatory activity of	polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Miraglia et al., J Biomolecular Screening 4:193- 204 (1999); Rowland et al.,	"Lymphocytes: a practical approach" Chapter 6:138-160 (2000): Cocchi et al., Science 270(5243):1811-1815 (1995); and Robinson et al., Clin Exp Immunol 101(3):398-407 (1995), the contents of each of	which are herein incorporated by reference in its entirety. Endothelial cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary endothelial cells

SI		A highly preferred indication is allergy.  Another highly preferred indication is asthma.  Additional highly preferred inflammation and inflammatory disorders.  Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders").  Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lubus erythematosis, multiple
that may be used according to these assays include human umbilical vein endothelial cells (HUVEC), which are endothelial cells which line venous blood vessels, and are involved in functions that include, but are not limited to, angiogenesis, vascular permeability, vascular tone, and immune cell extravasation.		Assays for the activation of transcription through the Signal Transducers and Activators of Transcription (STAT6) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate STAT6 transcription factors and modulate the expression of multiple genes. Exemplary assays for transcription through the STAT6 response element that may be used or
	CXCR4 in SW480	Activation of transcription through STAT6 response element in immune cells (such as T-cells).
	1386	1387
	HOUCQ17	HOUDK26
	438	439

	routinely modified to test	sclerosis and/or as described
	STAT6 response element	below) and
	activity of the polypeptides of	immunodeficiencies (e.g., as
	the invention (including	described below).
	antibodies and agonists or	Preferred indications include
	antagonists of the invention)	neoplastic diseases (e.g.,
	include assays disclosed in	leukemia, lymphoma,
	Berger et al., Gene 66:1-10	melanoma, and/or as described
	(1998); Cullen and Malm,	below under
	Methods in Enzymol 216:362-	"Hyperproliferative
	368 (1992); Henthorn et al.,	Disorders"). Preferred
	Proc Natl Acad Sci USA	indications include neoplasms
	85:6342-6346 (1988); Georas	and cancers, such as, leukemia,
	et al., Blood 92(12):4529-4538	lymphoma, melanoma, and
 -	(1998); Moffatt et al.,	prostate, breast, lung, colon,
	Transplantation 69(7):1521-	pancreatic, esophageal,
	1523 (2000); Curiel et al., Eur	stomach, brain, liver and
	J Immunol 27(8):1982-1987	urinary cancer. Other preferred
	(1997); and Masuda et al., J	indications include benign
	Biol Chem 275(38):29331-	dysproliferative disorders and
	29337 (2000), the contents of	pre-neoplastic conditions, such
	each of which are herein	as, for example, hyperplasia,
	incorporated by reference in its	metaplasia, and/or dysplasia.
	entirety. T cells that may be	Preferred indications include
	used according to these assays	anemia, pancytopenia,
	are publicly available (e.g.,	leukopenia, thrombocytopenia,
	through the ATCC).	Hodgkin's disease, acute
	Exemplary T cells that may be	lymphocytic anemia (ALL),
	used according to these assays	plasmacytomas, multiple
	include the SUPT cell line,	myeloma, Burkitt's lymphoma,
	which is a suspension culture	arthritis, AIDS, granulomatous

disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additional preferred indication is infectious disease as described below under "Infectious Disease").				roduced A highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) Ereases IL-6 production. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., n of IL-6 reducing) IL-6 production. A simmune highly preferred indication is the stimulation or enhancement
of IL-2 and IL-4 responsive T cells.				IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced IgE production and increases IgA production (IgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas,
	IFNg in Human T-cell 2B9	SEAP in NK16/STAT6	SEAP in UMR-106	Production of IL-6
	1388	1388	1388	1389
	HOVCA92	HOVCA92	HOVCA92	HPASA81
	440	440	440	441

	myelomas, and chronic	of mucosal immunity. Highly
	hyperproliferative diseases.	preferred indications include
	Assays for immunomodulatory	blood disorders (e.g., as
	and differentiation factor	described below under
	proteins produced by a large	"Immune Activity", "Blood-
	variety of cells where the	Related Disorders", and/or
	expression level is strongly	"Cardiovascular Disorders"),
	regulated by cytokines, growth	and infection (e.g., as
	factors, and hormones are well	described below under
	known in the art and may be	"Infectious Disease"). Highly
	used or routinely modified to	preferred indications include
	assess the ability of	autoimmune diseases (e.g.,
	polypeptides of the invention	rheumatoid arthritis, systemic
	(including antibodies and	lupus erythematosis, multiple
	agonists or antagonists of the	sclerosis and/or as described
	invention) to mediate	below) and
	immunomodulation and	immunodeficiencies (e.g., as
	differentiation and modulate T	described below). Highly
	cell proliferation and function.	preferred indications also
	Exemplary assays that test for	include boosting a B cell-
	immunomodulatory proteins	mediated immune response
	evaluate the production of	and alternatively suppressing a
	cytokines, such as IL-6, and	B cell-mediated immune
	the stimulation and	response. Highly preferred
	upregulation of T cell	indications include
	proliferation and functional	inflammation and
	activities. Such assays that	inflammatory
	may be used or routinely	disorders.Additional highly
	modified to test	preferred indications include
	immunomodulatory and	asthma and allergy. Highly
	diffferentiation activity of	preferred indications include

	polypeptides of the invention	neoplastic diseases (e.g.,
	(including antibodies and	myeloma, plasmacytoma,
	agonists or antagonists of the	leukemia, lymphoma,
	invention) include assays	melanoma, and/or as described
	disclosed in Miraglia et al., J	below under
	Biomolecular Screening 4:193-	"Hyperproliferative
	204(1999); Rowland et al.,	Disorders"). Highly preferred
	"Lymphocytes: a practical	indications include neoplasms
	approach" Chapter 6:138-160	and cancers, such as, myeloma,
	(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
	Immunol 158:2919-2925	lymphoma, melanoma, and
	(1997), the contents of each of	prostate, breast, lung, colon,
	which are herein incorporated	pancreatic, esophageal,
	by reference in its entirety.	stomach, brain, liver and
	Human dendritic cells that may	urinary cancer. Other preferred
	be used according to these	indications include benign
	assays may be isolated using	dysproliferative disorders and
	techniques disclosed herein or	pre-neoplastic conditions, such
	otherwise known in the art.	as, for example, hyperplasia,
	Human dendritic cells are	metaplasia, and/or dysplasia.
	antigen presenting cells in	Preferred indications include
	suspension culture, which,	anemia, pancytopenia,
	when activated by antigen	leukopenia, thrombocytopenia,
	and/or cytokines, initiate and	Hodgkin's disease, acute
	upregulate T cell proliferation	lymphocytic anemia (ALL),
	and functional activities.	multiple myeloma, Burkitt's
		lymphoma, arthritis, AIDS,
		granulomatous disease,
		inflammatory bowel disease,
		sepsis, neutropenia,
		neutrophilia, psoriasis,

					suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additonal preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
442	HPBCU51	1390	Regulation of viability or proliferation of immune cells (such as human eosinophil EOL-1 cells).	Assays for the regulation (i.e. increases or decreases) of viability and proliferation of cells in vitro are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate viability and proliferation of eosinophil cells and cell lines. For example, the CellTiter-Gloô Luminescent Cell Viability Assay (Promega Corp., Madison, WI, USA) can be used to measure the number of viable cells in culture based on quantitation of the ATP	Highly preferred indications include eosinophilia, asthma, allergy, hypersensitivity reactions, inflammation, and inflammatory disorders.  Additional highly preferred indications include immune and hematopoietic disorders (e.g., as described below under "Immune Activity", and "Blood-Related Disorders"), autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, Crohn"s disease, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below). Highly preferred indications also include boosting or inhibiting

				present which signals the presence of metabolically active cells. Eosinophils are a type of immune cell important in allergic responses; they are recruited to tissues and mediate the inflammtory response of late stage allergic reaction. Eosinophil cell lines that may be used according to these assays are publicly available and/or may be routinely generated.  Exemplary eosinophil cells that may be used according to these assays include EOL-1 Cells.	immune cell proliferation. Preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Highly preferred indications include boosting an eosinophil-mediated immune response, and suppressing an eosinophil-mediated immune response.
442	HPBCU51	1390	Glucose Production in H4IIE		
442	HPBCU51	1390	SEAP in HIB/CRE		
442	HPBCU51	1390	Production of GM-CSF	GM-CSF FMAT. GM-CSF is expressed by activated T cells, macrophages, endothelial cells, and fibroblasts. GM-CSF regulates differentiation and proliferation of granulocytesmacrophage progenitors and enhances antimicrobial activity in neutrophils, monocytes and macrophage. Additionally,	A highly preferred embodiment of the invention includes a method for stimulating the production of GM-CSF. An alternative highly preferred embodiment of the invention includes a method for inhibiting the production of GM-CSF. Highly preferred indications

GM-CSF plays an important	include inflammation and
role in the differentiation of	inflammatory disorders. An
dendritic cells and monocytes,	additional highly preferred
and increases antigen	indication is infection (e.g., as
presentation. GM-CSF is	described below under
considered to be a	"Infectious Disease".
proinflammatory cytokine.	Highly preferred indications
Assays for immunomodulatory	include blood disorders (e.g.,
 proteins that promote the	neutropenia (and the
production of GM-CSF are	prevention of neutropenia
well known in the art and may	(e.g., in HIV infected patients),
be used or routinely modified	and/or as described below
 to assess the ability of	under "Immune Activity",
polypeptides of the invention	"Blood-Related Disorders",
(including antibodies and	and/or "Cardiovascular
agonists or antagonists of the	Disorders"). Highly preferred
invention) to mediate	indications also include
immunomodulation and	autoimmune diseases (e.g.,
modulate the growth and	rheumatoid arthritis, systemic
differentiation of leukocytes.	lupus erythematosis, multiple
 Exemplary assays that test for	sclerosis and/or as described
immunomodulatory proteins	below) and
evaluate the production of	immunodeficiencies (e.g., as
cytokines, such as GM-CSF,	described below). Additional
and the activation of T cells.	highly preferred indications
Such assays that may be used	include asthma. Highly
or routinely modified to test	preferred indications include
immunomodulatory activity of	neoplastic diseases (e.g.,
polypeptides of the invention	leukemia (e.g., acute
(including antibodies and	lymphoblastic leukemia, and
agonists or antagonists of the	acute myelogenous leukemia),

		 invention) include the assays	lymphoma (e.g., non-
		 disclosed in Miraglia et al., J	Hodgkin"s lymphoma and
		Biomolecular Screening 4:193-	Hodgkin"s disease), and/or as
		204 (1999); Rowland et al.,	described below under
		"Lymphocytes: a practical	"Hyperproliferative
		approach" Chapter 6:138-160	Disorders"). Highly preferred
		(2000); and Ye et al., J Leukoc	indications include neoplasms
		Biol (58(2):225-233, the	and cancers, such as, leukemia,
		 contents of each of which are	lymphoma, melanoma, and
		 herein incorporated by	prostate, breast, lung, colon,
		reference in its entirety.	pancreatic, esophageal,
		 Natural killer cells that may be	stomach, brain, liver and
		 used according to these assays	urinary cancer. Other preferred
•		are publicly available (e.g.,	indications include benign
		 through the ATCC) or may be	dysproliferative disorders and
		 isolated using techniques	pre-neoplastic conditions, such
		 disclosed herein or otherwise	as, for example, hyperplasia,
		known in the art. Natural	metaplasia, and/or dysplasia.
		 killer (NK) cells are large	Highly preferred indications
		 granular lymphocytes that have	include: suppression of
		cytotoxic activity but do bind	immune reactions to
		 antigen. NK cells show	transplanted organs and tissues
		antibody-independent killing	(e.g., bone marrow transplant);
		 of tumor cells and also	accelerating myeloid recovery;
		 recognize antibody bound on	and mobilizing hematopoietic
		target cells, via NK Fc	progenitor cells. Preferred
		 receptors, leading to cell-	indications include boosting a
		 mediated cytotoxicity.	T cell-mediated immune
			response, and alternatively,
			suppressing a T cell-mediated
, -			immune response. Preferred

					indications include anemia, pancytopenia, leukopenia, thrombocytopenia, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutrophilia, psoriasis, hemophilia, psoriasis, hemophilia, mellitus, endocarditis, meningitis, Lyme Disease, and alleroy
442	HPBCU51	1390	IL-8 in SW480		73
442	HPBCU51	1390	SEAP in UMR-106		
443	HPDDC77	1391	Activation of T-Cell p38 or JNK Signaling Pathway.	Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote or inhibit immune cell (e.g. T-cell) proliferation,	Preferred indications include neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), blood disorders (e.g., as described below under "Immune Activity", "Cardiovascular Disorders", and/or "Blood-Related Disorders"), and infection (e.g., an infectious disease as described below under "Infectious Disease"). Highly

activation, and apoptosis.	preferred indications include
Exemplary assays for JNK and	
p38 kinase activity that may be	
used or routinely modified to	lupus erythematosis, multiple
test JNK and p38 kinase-	sclerosis and/or as described
induced activity of	below) and
polypeptides of the invention	immunodeficiencies (e.g., as
(including antibodies and	described below). Additional
agonists or antagonists of the	highly preferred indications
invention) include the assays	include inflammation and
disclosed in Forrer et al., Biol	inflammatory disorders.
Chem 379(8-9):1101-1110	Highly preferred indications
(1998); Gupta et al., Exp Cell	also include neoplastic
Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
Kyriakis JM, Biochem Soc	lymphoma, and/or as described
Symp 64:29-48 (1999); Chang	below under
and Karin, Nature	"Hyperproliferative
410(6824):37-40 (2001); and	Disorders"). Highly preferred
Cobb MH, Prog Biophys Mol	indications include neoplasms
Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
the contents of each of which	lymphoma, prostate, breast,
are herein incorporated by	lung, colon, pancreatic,
reference in its entirety. T	esophageal, stomach, brain,
cells that may be used	liver, and urinary cancer. Other
according to these assays are	preferred indications include
publicly available (e.g.,	benign dysproliferative
through the ATCC).	disorders and pre-neoplastic
Exemplary mouse T cells that	conditions, such as, for
may be used according to these	example, hyperplasia,
assays include the CTLL cell	metaplasia, and/or dysplasia.
line, which is an IL-2	Preferred indications include

				dependent suspension-culture cell line with cytotoxic activity.	arthritis, asthma, AIDS, allergy, anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin"s disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt"s lymphoma, granulomatous disease, inflammatory bowel disease, sepsis, psoriasis, suppression of immune reactions to transplanted organs and tissues, endocarditis, meninoitis, and I yme Disease
443	HPDDC77	1391	IL-2 in Human T cells		
443	HPDDC77	1391	Caspase (+paclitaxel) in SW480		
444	HPDWP28	1392	SEAP in HIB/CRE		
444	HPDWP28	1392	CD152 in Human T cells		
445	HPEAD48	1393	Activation of transcription through NFAT response element in immune cells (such as mast cells).	This reporter assay measures activation of the NFAT signaling pathway in HMC-1 human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the	Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and inflammation and

activation of transcription	inflammatory disorders.
through the Nuclear Factor of	Preferred indications also
Activated T cells (NFAT)	include blood disorders (e.g.,
response element are well-	as described below under
known in the art and may be	"Immune Activity", "Blood-
used or routinely modified to	Related Disorders", and/or
assess the ability of	"Cardiovascular Disorders").
polypeptides of the invention	Preferred indications include
(including antibodies and	autoimmune diseases (e.g.,
agonists or antagonists of the	rheumatoid arthritis, systemic
invention) to regulate NFAT	lupus erythematosis, multiple
transcription factors and	sclerosis and/or as described
modulate expression of genes	below) and
involved in	immunodeficiencies (e.g., as
immunomodulatory functions.	described below). Preferred
Exemplary assays for	indications include neoplastic
transcription through the	diseases (e.g., leukemia,
NFAT response element that	lymphoma, melanoma,
may be used or routinely	prostate, breast, lung, colon,
modified to test NFAT-	pancreatic, esophageal,
response element activity of	stomach, brain, liver, and
polypeptides of the invention	urinary tract cancers and/or as
(including antibodies and	described below under
agonists or antagonists of the	"Hyperproliferative
invention) include assays	Disorders"). Other preferred
disclosed in Berger et al., Gene	indications include benign
66:1-10 (1998); Cullen and	dysproliferative disorders and
Malm, Methods in Enzymol	pre-neoplastic conditions, such
216:362-368 (1992); Henthorn	as, for example, hyperplasia,
et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
85:6342-6346 (1988); De Boer	Preferred indications include

				of al Int I Biachem Cell Rial	anemia nanovdonenia
				21(10):1001 1026 (1000): A1:	Information thromboartonous
				31(10):1221-1230 (1999); All	reukopenia, infombocytopenia,
				et al., J Immunol	leukemias, Hodgkin's disease,
				165(12):7215-7223 (2000);	acute lymphocytic anemia
				Hutchinson and McCloskey, J	(ALL), plasmacytomas,
				Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
				16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
				al., J Exp Med 188:527-537	granulomatous disease,
				(1998), the contents of each of	inflammatory bowel disease,
				which are herein incorporated	sepsis, neutropenia,
				by reference in its entirety.	neutrophilia, psoriasis,
				Mast cells that may be used	suppression of immune
				according to these assays are	reactions to transplanted
				publicly available (e.g.,	organs and tissues, hemophilia,
				through the ATCC).	hypercoagulation, diabetes
				Exemplary human mast cells	mellitus, endocarditis,
				that may be used according to	meningitis, and Lyme Disease.
·				these assays include the HMC-	
				1 cell line, which is an	
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HPEAD48	1393	SEAP in		
445			Senescence Assay	Anatom	
	HPEBE79	1394	Activation of	This reporter assay measures	Highly preferred indications
446			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection

immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
as mast cells).	cells has been linked to	described below under
	cytokine and chemokine	"Infectious Disease"), and
	production. Assays for the	inflammation and
	activation of transcription	inflammatory disorders.
	through the GATA3 response	Preferred indications also
	element are well-known in the	include blood disorders (e.g.,
	art and may be used or	as described below under
	routinely modified to assess	"Immune Activity", "Blood-
	the ability of polypeptides of	Related Disorders", and/or
	the invention (including	"Cardiovascular Disorders").
	antibodies and agonists or	Preferred indications include
	antagonists of the invention) to	autoimmune diseases (e.g.,
	regulate GATA3 transcription	rheumatoid arthritis, systemic
	factors and modulate	lupus erythematosis, multiple
	expression of mast cell genes	sclerosis and/or as described
	important for immune response	below) and
	development. Exemplary	immunodeficiencies (e.g., as
	assays for transcription	described below). Preferred
	through the GATA3 response	indications include neoplastic
	element that may be used or	diseases (e.g., leukemia,
	routinely modified to test	lymphoma, melanoma,
	GATA3-response element	prostate, breast, lung, colon,
	activity of polypeptides of the	pancreatic, esophageal,
	invention (including antibodies	stomach, brain, liver, and
	and agonists or antagonists of	urinary tract cancers and/or as
	the invention) include assays	described below under
	disclosed in Berger et al., Gene	"Hyperproliferative
	66:1-10 (1998); Cullen and	Disorders"). Other preferred
	Malm, Methods in Enzymol	indications include benign
	216:362-368 (1992); Henthorn	dysproliferative disorders and

				et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
				85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
				et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
				Quant Biol 64:563-571 (1999);	Preferred indications include
				Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
				J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
				(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
				Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
				Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
				14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
				contents of each of which are	lymphoma, arthritis, AIDS,
				herein incorporated by	granulomatous disease,
				reference in its entirety. Mast	inflammatory bowel disease,
				cells that may be used	sepsis, neutropenia,
				according to these assays are	neutrophilia, psoriasis,
				publicly available (e.g.,	suppression of immune
				through the ATCC).	reactions to transplanted
				Exemplary human mast cells	organs and tissues, hemophilia,
				that may be used according to	hypercoagulation, diabetes
				these assays include the HMC-	mellitus, endocarditis,
				I cell line, which is an	meningitis, and Lyme Disease.
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
	-			cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HPFCL43	1395	SEAP in ATP-3T3-		
447			L1		
	HPFCL43	1395	Activation of	Assays for the activation of	A preferred embodiment of
447			transcription	transcription through the	the invention includes a

through serum	Serum Response Element	method for inhibiting (e.g.,
response element in	(SRE) are well-known in the	reducing) TNF alpha
immune cells (such	art and may be used or	production. An alternative
as T-cells).	routinely modified to assess	preferred embodiment of the
	the ability of polypeptides of	invention includes a method
	the invention (including	for stimulating (e.g.,
_	antibodies and agonists or	increasing) TNF alpha
	antagonists of the invention) to	production. Preferred
	regulate the serum response	indications include blood
	factors and modulate the	disorders (e.g., as described
	expression of genes involved	below under "Immune
	in growth. Exemplary assays	Activity", "Blood-Related
•	for transcription through the	Disorders", and/or
	SRE that may be used or	"Cardiovascular Disorders"),
	routinely modified to test SRE	Highly preferred indications
	activity of the polypeptides of	include autoimmune diseases
	the invention (including	(e.g., rheumatoid arthritis,
	antibodies and agonists or	systemic lupus erythematosis,
	antagonists of the invention)	Crohn"s disease, multiple
 _	include assays disclosed in	sclerosis and/or as described
	Berger et al., Gene 66:1-10	below), immunodeficiencies
	(1998); Cullen and Malm,	(e.g., as described below),
	Methods in Enzymol 216:362-	boosting a T cell-mediated
	368 (1992); Henthorn et al.,	immune response, and
	Proc Natl Acad Sci USA	suppressing a T cell-mediated
	85:6342-6346 (1988); and	immune response. Additional
	Black et al., Virus Genes	highly preferred indications
	12(2):105-117 (1997), the	include inflammation and
	content of each of which are	inflammatory disorders, and
	herein incorporated by	treating joint damage in
	reference in its entirety. T	patients with rheumatoid

	cells that may be used	arthritis. An additional highly
	according to these assays are	preferred indication is sepsis.
	publicly available (e.g.,	Highly preferred indications
	through the ATCC).	include neoplastic diseases
	Exemplary mouse T cells that	(e.g., leukemia, lymphoma,
	may be used according to these	and/or as described below
	assays include the CTLL cell	under "Hyperproliferative
	line, which is an IL-2	Disorders"). Additionally,
	dependent suspension culture	highly preferred indications
	of T cells with cytotoxic	include neoplasms and
	activity.	cancers, such as, for example,
		leukemia, lymphoma,
		melanoma, glioma (e.g.,
		malignant glioma), solid
		tumors, and prostate, breast,
		lung, colon, pancreatic,
		esophageal, stomach, brain,
		liver and urinary cancer. Other
 		preferred indications include
		benign dysproliferative
		disorders and pre-neoplastic
		conditions, such as, for
		example, hyperplasia,
		metaplasia, and/or dysplasia.
		Preferred indications include
		anemia, pancytopenia,
		leukopenia, thrombocytopenia,
		Hodgkin's disease, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,

					arthritis, AIDS, granulomatous disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below
	HPFCL43	1395	Caspase (+camptothecin) in SW480		
}	HPFDG48	1396	SEAP in 293/ISRE		
	HPFDG48	1396	Production of TNF alpha by dendritic cells	TNFa FMAT. Assays for immunomodulatory proteins produced by activated macrophages, T cells, fibroblasts, smooth muscle, and other cell types that exert a wide variety of inflammatory and cytotoxic effects on a variety of cells are well known in the art and may be used or	A highly preferred embodiment of the invention includes a method for inhibiting (e.g., decreasing) TNF alpha production. An alternative highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production.

	routinely modified to assess	Highly preferred indications
	the ability of polypeptides of	include blood disorders (e.g.,
	the invention (including	as described below under
	antibodies and agonists or	"Immune Activity", "Blood-
	antagonists of the invention) to	Related Disorders", and/or
	mediate immunomodulation,	"Cardiovascular Disorders"),
	modulate inflammation and	Highly preferred indications
	cytotoxicity. Exemplary	include autoimmune diseases
	assays that test for	(e.g., rheumatoid arthritis,
	immunomodulatory proteins	systemic lupus erythematosis,
	evaluate the production of	Crohn"s disease, multiple
	cytokines such as tumor	sclerosis and/or as described
-	necrosis factor alpha (TNFa),	below), immunodeficiencies
	and the induction or inhibition	(e.g., as described below),
	of an inflammatory or	boosting a T cell-mediated
	cytotoxic response. Such	immune response, and
	assays that may be used or	suppressing a T cell-mediated
	routinely modified to test	immune response. Additional
	immunomodulatory activity of	highly preferred indications
	polypeptides of the invention	include inflammation and
	(including antibodies and	inflammatory disorders, and
	agonists or antagonists of the	treating joint damage in
 -	invention) include assays	patients with rheumatoid
	disclosed in Miraglia et al., J	arthritis. An additional highly
	Biomolecular Screening 4:193-	preferred indication is sepsis.
	204(1999); Rowland et al.,	Highly preferred indications
	"Lymphocytes: a practical	include neoplastic diseases
	approach" Chapter 6:138-160	(e.g., leukemia, lymphoma,
	(2000); Verhasselt et al., Eur J	and/or as described below
	Immunol 28(11):3886-3890	under "Hyperproliferative
	(1198); Dahlen et al., J	Disorders"). Additionally,

	Immunol 160(7):3585-3593	highly preferred indications
	(1998); Verhasselt et al., J	include neoplasms and
	Immunol 158:2919-2925	cancers, such as, leukemia,
	(1997); and Nardelli et al., J	lymphoma, melanoma, glioma
	Leukoc Biol 65:822-828	(e.g., malignant glioma), solid
	(1999), the contents of each of	tumors, and prostate, breast,
	which are herein incorporated	lung, colon, pancreatic,
	by reference in its entirety.	esophageal, stomach, brain,
	Human dendritic cells that may	liver and urinary cancer. Other
	be used according to these	preferred indications include
	assays may be isolated using	benign dysproliferative
	techniques disclosed herein or	disorders and pre-neoplastic
	otherwise known in the art.	conditions, such as, for
	Human dendritic cells are	example, hyperplasia,
	antigen presenting cells in	metaplasia, and/or dysplasia.
	suspension culture, which,	Preferred indications include
	when activated by antigen	anemia, pancytopenia,
	and/or cytokines, initiate and	leukopenia, thrombocytopenia,
	upregulate T cell proliferation	Hodgkin's disease, acute
	and functional activities.	lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		arthritis, AIDS, granulomatous
		disease, inflammatory bowel
		disease, neutropenia,
		neutrophilia, psoriasis,
		suppression of immune
		reactions to transplanted
		organs and tissues,
		hemophilia, hypercoagulation,
		diabetes mellitus, endocarditis,

					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
			:		asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HPFDG48	1396	Activation of	Assays for the activation of	Highly preferred indications
448			transcription	transcription through the	include allergy, asthma, and
			through STAT6	Signal Transducers and	rhinitis. Additional highly
			response element in	Activators of Transcription	preferred indications include
			immune cells (such	(STAT6) response element in	infection (e.g., an infectious
			as mast cells).	immune cells (such as in the	disease as described below
				human HMC-1 mast cell line)	under "Infectious Disease"),
				are well-known in the art and	and inflammation and
				may be used or routinely	inflammatory disorders.
				modified to assess the ability	Preferred indications also
				of polypeptides of the	include hematopoietic and
				invention (including antibodies	immunological disorders (e.g.,
				and agonists or antagonists of	as described below under
				the invention) to regulate	"Immune Activity", "Blood-
				STAT6 transcription factors	Related Disorders", and/or
				and modulate the expression of	"Cardiovascular Disorders"),
				multiple genes. Exemplary	autoimmune diseases (e.g.,
				assays for transcription	rheumatoid arthritis, systemic
				through the STAT6 response	lupus erythematosis, multiple
				element that may be used or	sclerosis and/or as described
				routinely modified to test	below), and
				STAT6 response element	immunodeficiencies (e.g., as
				activity of the polypeptides of	described below). Preferred
				the invention (including	indications include neoplastic

antibodies and agonists or	diseases (e.g., leukemia,
antagonists of the invention)	lymphoma, melanoma, and/or
include assays disclosed in	as described below under
Berger et al., Gene 66:1-10	"Hyperproliferative
(1998); Cullen and Malm,	Disorders"). Preferred
Methods in Enzymol 216:362-	indications include neoplasms
368 (1992); Henthorn et al.,	and cancer, such as, for
 Proc Natl Acad Sci USA	example, leukemia, lymphoma,
85:6342-6346 (1988);	melanoma, and prostate,
Sherman, Immunol Rev	breast, lung, colon, pancreatic,
179:48-56 (2001); Malaviya	esophageal, stomach, brain,
and Uckun, J Immunol	liver and urinary cancer. Other
168:421-426 (2002); Masuda	preferred indications include
et al., J Biol Chem	benign dysproliferative
275(38):29331-29337 (2000);	disorders and pre-neoplastic
and Masuda et al., J Biol Chem	conditions, such as, for
276:26107-26113 (2001), the	example, hyperplasia,
contents of each of which are	metaplasia, and/or dysplasia.
herein incorporated by	Preferred indications include
reference in its entirety. Mast	hematopoietic and
cells that may be used	immunological disorders such
according to these assays are	as arthritis, AIDS,
publicly available (e.g.,	granulomatous disease,
through the ATCC).	inflammatory bowel disease,
Exemplary human mast cells	sepsis, neutropenia,
that may be used according to	neutrophilia, psoriasis,
these assays include the HMC-	suppression of immune
1 cell line, which is an	reactions to transplanted
immature human mast cell line	organs and tissues, hemophilia,
established from the peripheral	hypercoagulation, diabetes
blood of a patient with mast	mellitus, endocarditis,

				cell leukemia, and exhibits	meningitis, and Lyme Disease.
				many characteristics of immature mast cells.	
448	HPFDG48	1396	SEAP in OE-21		
448	HPFDG48	1396	SEAP in UMR-106		
449	HPIAQ68	1397	Production of IL-6	IL-6 FMAT. IL-6 is produced by T cells and has strong	A highly preferred embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced  [gE production and increases	stimulating (e.g., increasing) IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a
				IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,
				Deregulated expression of IL-6	reducing) IL-6 production. A
				has been linked to autoimmune	highly preferrred indication is
				disease, plasmacytomas,	the stimulation or enhancement
				myelomas, and chronic	of mucosal immunity. Highly
				hyperproliferative diseases.	preferred indications include
				Assays for immunomodulatory	blood disorders (e.g., as
				and differentiation factor	described below under
				proteins produced by a large	"Immune Activity", "Blood-
				variety of cells where the	Related Disorders", and/or
				expression level is strongly	"Cardiovascular Disorders"),
				regulated by cytokines, growth	and infection (e.g., as
				factors, and hormones are well	described below under
				known in the art and may be	"Infectious Disease"). Highly
				used or routinely modified to	preferred indications include
				assess the ability of	autoimmune diseases (e.g.,
				polypeptides of the invention	rheumatoid arthritis, systemic

(incl	(including antibodies and	lupus erythematosis, multiple
agon	agonists or antagonists of the	sclerosis and/or as described
inve	invention) to mediate	below) and
imm	immunomodulation and	immunodeficiencies (e.g., as
 diffe	differentiation and modulate T	described below). Highly
cell	cell proliferation and function.	preferred indications also
Exer	Exemplary assays that test for	include boosting a B cell-
imm	immunomodulatory proteins	mediated immune response
 evali	evaluate the production of	and alternatively suppressing a
cyto	cytokines, such as IL-6, and	B cell-mediated immune
the s	the stimulation and	response. Highly preferred
upre	upregulation of T cell	indications include
proli	proliferation and functional	inflammation and
activ	activities. Such assays that	inflammatory
may	may be used or routinely	disorders.Additional highly
pom	modified to test	preferred indications include
 imm	immunomodulatory and	asthma and allergy. Highly
difff	diffferentiation activity of	preferred indications include
poly	polypeptides of the invention	neoplastic diseases (e.g.,
 (incl	(including antibodies and	myeloma, plasmacytoma,
agon	agonists or antagonists of the	leukemia, lymphoma,
inve	invention) include assays	melanoma, and/or as described
discl	disclosed in Miraglia et al., J	below under
 Bion	Biomolecular Screening 4:193-	"Hyperproliferative
 204(	204(1999); Rowland et al.,	Disorders"). Highly preferred
"Lyn	"Lymphocytes: a practical	indications include neoplasms
appr	approach" Chapter 6:138-160	and cancers, such as, myeloma,
(200	(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
Imm	Immunol 158:2919-2925	lymphoma, melanoma, and
(199	(1997), the contents of each of	prostate, breast, lung, colon,
whic	which are herein incorporated	pancreatic, esophageal,

				by reference in its entirety.	stomach, brain, liver and
				Human dendritic cells that may	urinary cancer. Other preferred
				be used according to these	indications include benign
				assays may be isolated using	dysproliferative disorders and
				techniques disclosed herein or	pre-neoplastic conditions, such
				otherwise known in the art.	as, for example, hyperplasia,
				Human dendritic cells are	metaplasia, and/or dysplasia.
				antigen presenting cells in	Preferred indications include
				suspension culture, which,	anemia, pancytopenia,
				when activated by antigen	leukopenia, thrombocytopenia,
				and/or cytokines, initiate and	Hodgkin's disease, acute
				upregulate T cell proliferation	lymphocytic anemia (ALL),
				and functional activities.	multiple myeloma, Burkitt's
					lymphoma, arthritis, AIDS,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, and Lyme Disease.
					An additonal preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
449	HPIAQ68	1397	Production of MCP-1	MCP-1 FMAT. Assays for immunomodulatory proteins	A highly preferred embodiment of the invention
				2000	

	that are produced by a large	includes a method for
	variety of cells and act to	stimulating (e.g., increasing)
	induce chemotaxis and	MCP-1 production. An
	activation of monocytes and T	alternative highly preferred
	cells are well known in the art	embodiment of the invention
	and may be used or routinely	includes a method for
	modified to assess the ability	inhibiting (e.g., reducing)
	of polypeptides of the	MCP-1 production. A highly
	invention (including antibodies	preferred indication is
	and agonists or antagonists of	infection (e.g., an infectious
	the invention) to mediate	disease as described below
	immunomodulation, induce	under "Infectious Disease").
	chemotaxis, and modulate	Additional highly preferred
	immune cell activation.	indications include
 	Exemplary assays that test for	inflammation and
	immunomodulatory proteins	inflammatory disorders.
	evaluate the production of cell	Preferred indications include
	surface markers, such as	blood disorders (e.g., as
	monocyte chemoattractant	described below under
	protein (MCP), and the	"Immune Activity", "Blood-
	activation of monocytes and T	Related Disorders", and/or
	cells. Such assays that may be	"Cardiovascular Disorders").
	used or routinely modified to	Highly preferred indications
	test immunomodulatory and	include autoimmune diseases
	diffferentiation activity of	(e.g., rheumatoid arthritis,
	polypeptides of the invention	systemic lupus erythematosis,
	(including antibodies and	multiple sclerosis and/or as
	agonists or antagonists of the	described below) and
	invention) include assays	immunodeficiencies (e.g., as
 	disclosed in Miraglia et al., J	described below). Preferred
	Biomolecular Screening 4:193-	indications also include

204(1999); Rowland et al.,		anemia, pancytopenia,
"Lymphocytes: a practical		leukopenia, thrombocytopenia,
approach" Chapter 6:138-160		Hodgkin's disease, acute
(2000); Satthaporn and		lymphocytic anemia (ALL),
Eremin, J R Coll Surg Ednb		plasmacytomas, multiple
45(1):9-19 (2001); and		myeloma, Burkitt's lymphoma,
Verhasselt et al., J Immunol		arthritis, AIDS, granulomatous
[ 158:2919-2925 (1997), the		disease, inflammatory bowel
contents of each of which are		disease, sepsis, neutropenia,
 herein incorporated by	-	neutrophilia, psoriasis,
reference in its entirety.		suppression of immune
Human dendritic cells that may		reactions to transplanted
 be used according to these		organs and tissues,
 assays may be isolated using		hemophilia, hypercoagulation,
techniques disclosed herein or		diabetes mellitus, endocarditis,
 otherwise known in the art.		meningitis (bacterial and
Human dendritic cells are		viral), Lyme Disease, asthma,
 antigen presenting cells in		and allergy Preferred
 suspension culture, which,	ich,	indications also include
when activated by antigen		neoplastic diseases (e.g.,
and/or cytokines, initiate and		leukemia, lymphoma, and/or as
upregulate T cell proliferation		described below under
and functional activities.		"Hyperproliferative
		Disorders"). Highly preferred
		indications include neoplasms
		and cancers, such as, leukemia,
	<del></del>	lymphoma, prostate, breast,
		lung, colon, pancreatic,
		esophageal, stomach, brain,
		liver, and urinary cancer. Other
		preferred indications include

					benign dysproliferative disorders and nre-neonlastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
	HPIB015	1398	Regulation of	Assays for the regulation of	A highly preferred indication
450			viability and	viability and proliferation of	is diabetes mellitus. An
			proliferation of	cells in vitro are well-known in	additional highly preferred
			pancreatic beta	the art and may be used or	indication is a complication
			cells.	routinely modified to assess	associated with diabetes (e.g.,
				the ability of polypeptides of	diabetic retinopathy, diabetic
				the invention (including	nephropathy, kidney disease
				antibodies and agonists or	(e.g., renal failure,
				antagonists of the invention) to	nephropathy and/or other
				regulate viability and	diseases and disorders as
				proliferation of pancreatic beta	described in the "Renal
				cells. For example, the Cell	Disorders" section below),
				Titer-Glo luminescent cell	diabetic neuropathy, nerve
				viability assay measures the	disease and nerve damage
				number of viable cells in	(e.g., due to diabetic
				culture based on quantitation	neuropathy), blood vessel
				of the ATP present which	blockage, heart disease, stroke,
				signals the presence of	impotence (e.g., due to diabetic
				metabolically active cells.	neuropathy or blood vessel
				Exemplary assays that may be	blockage), seizures, mental
				used or routinely modified to	confusion, drowsiness,
				test regulation of viability and	nonketotic hyperglycemic-
				proliferation of pancreatic beta	hyperosmolar coma,
				cells by polypeptides of the	cardiovascular disease (e.g.,
				invention (including antibodies	heart disease, atherosclerosis,
				and agonists or antagonists of	microvascular disease,

			the invention) include assays	hypertension, stroke, and other
			disclosed in: Friedrichsen BN,	diseases and disorders as
			et al., Mol Endocrinol,	described in the
			15(1):136-48 (2001); Huotari	"Cardiovascular Disorders"
			MA, et al., Endocrinology,	section below), dyslipidemia,
			139(4):1494-9 (1998); Hugl	endocrine disorders (as
			SR, et al., J Biol Chem 1998	described in the "Endocrine
			Jul 10;273(28):17771-9	Disorders" section below),
			(1998), the contents of each of	neuropathy, vision impairment
			which is herein incorporated	(e.g., diabetic retinopathy and
			by reference in its entirety.	blindness), ulcers and impaired
			Pancreatic cells that may be	wound healing, and infection
			used according to these assays	(e.g., infectious diseases and
			are publicly available (e.g.,	disorders as described in the
			through the ATCC) and/or	"Infectious Diseases" section
			may be routinely generated.	below, especially of the
			Exemplary pancreatic cells that	urinary tract and skin), carpal
			may be used according to these	tunnel syndrome and
			assays include rat INS-1 cells.	Dupuytren's contracture). An
			INS-1 cells are a semi-	additional highly preferred
			adherent cell line established	indication is obesity and/or
			from cells isolated from an X-	complications associated with
			ray induced rat transplantable	obesity. Additional highly
	-114		insulinoma. These cells retain	preferred indications include
			characteristics typical of native	weight loss or alternatively,
			pancreatic beta cells including	weight gain. Additional highly
			glucose inducible insulin	preferred indications are
			secretion. References: Asfari	complications associated with
			et al. Endocrinology 1992	insulin resistance.
			130:167.	
HPIBO15	1398	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred

450		by T cells and has strong	embodiment of the invention
		effects on B cells. IL-6	includes a method for
		participates in IL-4 induced	stimulating (e.g., increasing)
		IgE production and increases	IL-6 production. An alternative
		IgA production (IgA plays a	highly preferred embodiment
		role in mucosal immunity).	of the invention includes a
		IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,
		Deregulated expression of IL-6	reducing) IL-6 production. A
		has been linked to autoimmune	highly preferrred indication is
		disease, plasmacytomas,	the stimulation or enhancement
		myelomas, and chronic	of mucosal immunity. Highly
		hyperproliferative diseases.	preferred indications include
		Assays for immunomodulatory	blood disorders (e.g., as
		and differentiation factor	described below under
		proteins produced by a large	"Immune Activity", "Blood-
		variety of cells where the	Related Disorders", and/or
		expression level is strongly	"Cardiovascular Disorders"),
	-	regulated by cytokines, growth	and infection (e.g., as
		factors, and hormones are well	described below under
		known in the art and may be	"Infectious Disease"). Highly
-		used or routinely modified to	preferred indications include
		assess the ability of	autoimmune diseases (e.g.,
		polypeptides of the invention	rheumatoid arthritis, systemic
		(including antibodies and	lupus erythematosis, multiple
		agonists or antagonists of the	sclerosis and/or as described
		invention) to mediate	below) and
		immunomodulation and	immunodeficiencies (e.g., as
		differentiation and modulate T	described below). Highly
		cell proliferation and function.	preferred indications also
		Exemplary assays that test for	include boosting a B cell-
		immunomodulatory proteins	mediated immune response

to softon boss of	o solionocimus y cristomosto par
evaluate tire production of	and ancinatively suppressing a
cytokines, such as IL-6, and	B cell-mediated immune
the stimulation and	response. Highly preferred
upregulation of T cell	indications include
proliferation and functional	inflammation and
activities. Such assays that	inflammatory
may be used or routinely	disorders. Additional highly
modified to test	preferred indications include
immunomodulatory and	asthma and allergy. Highly
diffferentiation activity of	preferred indications include
 polypeptides of the invention	neoplastic diseases (e.g.,
 (including antibodies and	myeloma, plasmacytoma,
agonists or antagonists of the	leukemia, lymphoma,
invention) include assays	melanoma, and/or as described
disclosed in Miraglia et al., J	below under
Biomolecular Screening 4:193-	"Hyperproliferative
204(1999); Rowland et al.,	Disorders"). Highly preferred
   "Lymphocytes: a practical	indications include neoplasms
approach" Chapter 6:138-160	and cancers, such as, myeloma,
(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
Immunol 158:2919-2925	lymphoma, melanoma, and
(1997), the contents of each of	prostate, breast, lung, colon,
which are herein incorporated	pancreatic, esophageal,
by reference in its entirety.	stomach, brain, liver and
Human dendritic cells that may	urinary cancer. Other preferred
be used according to these	indications include benign
 assays may be isolated using	dysproliferative disorders and
techniques disclosed herein or	pre-neoplastic conditions, such
otherwise known in the art.	as, for example, hyperplasia,
 Human dendritic cells are	metaplasia, and/or dysplasia.
antigen presenting cells in	Preferred indications include

				suspension culture, which,	anemia, pancytopenia,
				when activated by antigen	leukopenia, thrombocytopenia,
				and/or cytokines, initiate and	Hodgkin's disease, acute
				upregulate T cell proliferation	lymphocytic anemia (ALL),
				and functional activities.	multiple myeloma, Burkitt's
					lymphoma, arthritis, AIDS,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
	-				meningitis, and Lyme Disease.
					An additonal preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
450	HPIBO15	1398	Glucose Production in H4IIE		
	HPICB53	1399	Endothelial Cell	Caspase Apoptosis. Assays for	A highly preferred
451			Apoptosis	caspase apoptosis are well	embodiment of the invention
				known in the art and may be	includes a method for
				used or routinely modified to	stimulating endothelial cell
				assess the ability of	growth. An alternative highly
		_		polypeptides of the invention	preferred embodiment of the
				(including antibodies and	invention includes a method
				agonists or antagonists of the	for inhibiting endothelial cell

invent	invention) to promote caspase	growth. A highly preferred
protea	protease-mediated apoptosis.	ē
Induct	Induction of apoptosis in	includes a method for
endoth	endothelial cells supporting the	stimulating endothelial cell
vascul	vasculature of tumors is	proliferation. An alternative
associ	associated with tumor	highly preferred embodiment
regress	regression due to loss of tumor	of the invention includes a
poold	blood supply. Exemplary	method for inhibiting
assays	assays for caspase apoptosis	endothelial cell proliferation.
that m	that may be used or routinely	A highly preferred
filom	modified to test capase	embodiment of the invention
apopte	apoptosis activity of	includes a method for
polype	polypeptides of the invention	stimulating apoptosis of
(include	(including antibodies and	endothelial cells. An
agonis	agonists or antagonists of the	alternative highly preferred
invent	invention) include the assays	embodiment of the invention
disclos	disclosed in Lee et al., FEBS	includes a method for
Lett 48	Lett 485(2-3): 122-126 (2000);	inhibiting (e.g., decreasing)
Nor et	Nor et al., J Vasc Res 37(3):	apoptosis of endothelial cells.
209-21	209-218 (2000); and Karsan	A highly preferred
and Hi	and Harlan, J Atheroscler	embodiment of the invention
Throm	Thromb 3(2): 75-80 (1996);	includes a method for
the col	the contents of each of which	stimulating angiogenisis. An
are her	are herein incorporated by	alternative highly preferred
referen	reference in its entirety.	embodiment of the invention
Endot	Endothelial cells that may be	includes a method for
used a	used according to these assays	inhibiting angiogenesis. A
are pu	are publicly available (e.g.,	highly preferred embodiment
throug	through commercial sources).	of the invention includes a
Exem	Exemplary endothelial cells	method for reducing cardiac
that m	that may be used according to	hypertrophy. An alternative

highly preferred embodiment	of the invention includes a	method for inducing cardiac	hypertrophy. Highly	ca	neoplastic diseases (e.g., as	described below under	"Hyperproliferative	Disorders"), and disorders of	the cardiovascular system	(e.g., heart disease, congestive	heart failure, hypertension,	aortic stenosis,	cardiomyopathy, valvular	regurgitation, left ventricular	dysfunction, atherosclerosis	and atherosclerotic vascular	disease, diabetic nephropathy,	intracardiac shunt, cardiac	hypertrophy, myocardial	infarction, chronic	hemodynamic overload, and/or	as described below under	"Cardiovascular Disorders").	Highly preferred indications	include cardiovascular,	endothelial and/or angiogenic	disorders (e.g., systemic	disorders that affect vessels	such as diabetes mellitus, as	well as diseases of the vessels
these assays include bovine	aortic endothelial cells	(bAEC), which are an example	of endothelial cells which line	blood vessels and are involved	in functions that include, but	are not limited to,	angiogenesis, vascular	permeability, vascular tone,	and immune cell extravasation.																					
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themselves, such as of the	arteries, capillaries, veins	and/or lymphatics). Highly	preferred are indications that	stimulate angiogenesis and/or	cardiovascularization. Highly	preferred are indications that	inhibit angiogenesis and/or	cardiovascularization.	Highly preferred indications	include antiangiogenic activity	to treat solid tumors,	leukemias, and Kaposi"s	sarcoma, and retinal disorders.	Highly preferred indications	include neoplasms and cancer,	such as, Kaposi"s sarcoma,	hemangioma (capillary and	cavernous), glomus tumors,	telangiectasia, bacillary	angiomatosis,	hemangioendothelioma,	angiosarcoma,	haemangiopericytoma,	lymphangioma,	lymphangiosarcoma. Highly	preferred indications also	include cancers such as,	prostate, breast, lung, colon,	aconhogo director

indications include benign hyperoliferative disorders a pre-neoplastic conditions, as, for example, hyperplas as, for example, hyperplas Highly preferred indication also include arterial diseas such as, alteroselerosis, hypertension, coronary art disease, inflammatory vasculificks, Reynaud's disease and Reynaud's phenomenon, aneurysms, restenosis, verous and hymphatic disorders such as and cancer. Highly preferred indications also include traums such as wounds, burns, and injured tissue (e.g., vascular nigorders such as wounds, burns, and injured tissue (e.g., vascular injury such as, rijury resulting th balloon angioplasty, and balloon angioplasty, and implant fixation, searring, isobarnia assarfician injury isobarnia assarfician in injury isobarnia assarfician injury isobarnia assarfician injury isobarnia, assarfing, insplant in injury isobarnia, assarfing in injury isobarnia, assarfing in injurical injury isobarnia, assarfing injury isobarnia, assarfing in injurical injury isobarnia, assarfing in injury isobarnia, assarfing in injury isobarnia, assarfing injury isob			urinary cancer Preferred
disproliferative disproliferative disproliferative disproliferative disproliferative disproliferative disproliferative disproliferative disproliferative disprace del Highly preferred indials include arterial such as, atheroselercy hypertension, coron disease, inflammation vascultides, Reynaudisease and Reynaudisease			annian y cancer: 1 telenica
pre-neoplastic condi- pre-neoplastic condi- pre-neoplastic condi- pre-neoplastic condi- pre-neoplastic and/or d Highly preferred ind also include arterial such as, atheroseler such as, atheroseler such as, atheroseler such as, atheroseler hypertension, coron disease, inflammato vasculitides, Reynau disease, inflammato prenomenon, aneu prenomenon, aneu restenosis; venous a lymphatic disorders thrombophlebitis, lymphatic disorders at peripheral vascular and cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angoplasty, atheroschlerotic lesi implati fixation, sec			indications include benign
pre-neoplastic condi as, for example, hyp metaplasia, and/ord Highly preferred ind also include arterial such as, atheroselerc hypertension, ocron disease, inflammato vascultides, Reynau phenomenom, aneur restenosis; venous a lymphatic disorders thrombophlebitis, and olymphatem; and ol vascular disorders as peripheral vascular and cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul indipatti fixation, sec includents in indipattic, second includents in indipattic indipatti fixation, sec includents in indipaton, sec includents in indipaton, sec includents in indipaton, sec includents in indipaton, sec includents indipaton, sec includents in indivaton, sec includents in indivaton, sec includents in indivations in indivations in indivator, sec includents in indivator in indivator in indivator, sec includents in indivator in indiva			dysproliferative disorders and
as, for example, hyp metaplasia, and/or d Highly preferred ind also include arterial such as, atherosclerc hypertension, coron disease, inflammato vasculitides, Reynau disease and Reynau phenomenom, aneur restenosis; venous a lymphatic disorders thrombophlebitis, lymphatic disorders and of vascular disorders as peripheral vascular and cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul implant fixation, sec implant fixation, sec	-		pre-neoplastic conditions, such
metaplasia, and/or d Highly preferred ind also include arterial such as, atherosclere hypertension, coron disease, inflammato vasculitides, Reynau disease and Reynau phenomenom, aneu restenosis, venous a lymphatic disorders a lymphatic disorders a hympheral vascular a nd cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular) alteroscillerotic lesi implant fixation, sec inclobant fixation, sec			as, for example, hyperplasia,
Highly preferred ind also include arterial such as, atheroselercy hypertension, coron disease, inflammation vasculitides, Reynau disease and Reynaut phenomenom, aneut restensis; venous a lymphatic disorders in thrombophlebitis, lymphatic disorders and cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vasculations and obligon angioplasty, attheroschlerotic lesi implation, see inchania resorders in implation angioplasty, attheroschlerotic lesi implation, see inchania resorders in implation, see inchania resorders in the resor			metaplasia, and/or dysplasia.
also include arterial such as, atherosclerc hypertension, coron disease, inflammaton vasculitides, Reynau disease and Reynauc phenomenon, aneur restenosis; venous a lymphatic disorders thrombothlebitis, lymphatic disorders stronombothlebitis, and lymphatic stronombothlebitis, and cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi imphatia traction, see inchangia respective is include inconstruction, see inchangia respective in the construction, see inchangia respective in the construction of the construction is a such as, injury resulting in the construction of the cons			Highly preferred indications
such as, atherosclerd hypertension, coron disease, inflammaton vasculitides, Reynaud disease and Reynaud phenomenom, aneur restenosis; venous a lymphatic disorders thrombophlebitis, lymphatic disorders and cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi imphatit fixation, set inchavaria resordering includent fixation inclu			also include arterial disease,
hypertension, coron disease, inflammato vasculitides, Reynau disease and Reynau disease and Reynau phenomenom, aneu restenosis, venous a lymphatic disorders a lymphangitis, and lymphedema; and ot vascular disorders sy peripheral vascular and cancer. High preferred indication include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see			such as, atherosclerosis,
disease, inflammato vasculitides, Reynau disease and Reynau disease and Reynau phenomenom, aneur restenosis; venous a lymphatic disorders thrombophlebitis, lymphatic disorders and lymphedema; and of vascular disorders si peripheral vascular and cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see			hypertension, coronary artery
vasculitides, Reynau disease and Reynaud phenomenom, aneur restenosis; venous a lymphatic disorders thrombophlebitis, lymphatic disorders and olymphedema; and olyascular disorders and encer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angiophasty, attheroschlerotic lesi implant fixation, see is chemis, resulting in the such see is chemistry.			disease, inflammatory
disease and Reynauc phenomenom, aneur restenosis; venous an Iymphatic disorders thrombophlebitis, Iymphangitis, and Iymphangitis, and Iymphedema; and ot vascular disorders stoperipheral vascular and cancer. High preferred indication: include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, social implant fixation, social includences.			vasculitides, Reynaud"s
phenomenom, aneur restenosis; venous an lymphatic disorders thrombophlebitis, lymphangitis, and lymphangitis, and lymphedema; and ot vascular disorders st peripheral vascular and cancer. High preferred indication: include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, soc			disease and Reynaud"s
restenosis; venous a lymphatic disorders thrombophlebitis, lymphangitis, and lymphadema; and ot vascular disorders st peripheral vascular dand cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see limplant fixation, see limplant fixation, see			phenomenom, aneurysms,
lymphatic disorders thrombophlebitis, lymphangitis, and lymphedema; and ot vascular disorders sr peripheral vascular and cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, sec			restenosis; venous and
thrombophlebitis, lymphangitis, and lymphedema; and ot vascular disorders st peripheral vascular dand cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see			lymphatic disorders such as
lymphangitis, and lymphedema; and ot vascular disorders so peripheral vascular and cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see ischemia paraerficion			thrombophlebitis,
lymphedema; and ot vascular disorders so peripheral vascular cand cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see ischemia reportinging			lymphangitis, and
vascular disorders su peripheral vascular c and cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, soc	-		lymphedema; and other
peripheral vascular cand cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resulballoon angioplasty, atheroschlerotic lesi implant fixation, see isohomia reportlesion			vascular disorders such as
and cancer. High preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resulballoon angioplasty, atheroschlerotic lesi implant fixation, see ischemia remarficion		•	peripheral vascular disease,
preferred indications include trauma such wounds, burns, and tissue (e.g., vascular such as, injury resul balloon angioplasty, atheroschlerotic lesi implant fixation, see ischemia remarficion			and cancer. Highly
include trauma such wounds, burns, and tissue (e.g., vascular such as, injury result balloon angioplasty, atheroschlerotic lesi implant fixation, see			preferred indications also
wounds, burns, and tissue (e.g., vascular such as, injury result balloon angioplasty, atheroschlerotic lesi implant fixation, see ischemia remarficion			include trauma such as
tissue (e.g., vascular such as, injury result balloon angioplasty, atheroschlerotic lesi implant fixation, see ischemia renerficion		-	wounds, burns, and injured
such as, injury result balloon angioplasty, atheroschlerotic lesi implant fixation, see ischemia remarficion			tissue (e.g., vascular injury
balloon angioplasty, atheroschlerotic lesi implant fixation, see			such as, injury resulting from
atheroschlerotic lesi implant fixation, see inchemia renerflicion			balloon angioplasty, and
implant fixation, sea			atheroschlerotic lesions),
in the marking the manufacture of the marking the mark	 		implant fixation, scarring,
ויסטויטווים ויסטיים ו			ischemia reperfusion injury,

		41	rheumatoid arthritis,
		3 <del></del>	cerebrovascular disease, renal
		ra fa	failure, and osteoporosis.
		A	Additional highly preferred
		ui —	indications include stroke,
		- g	graft rejection, diabetic or
		ot	other retinopathies, thrombotic
		ar	and coagulative disorders,
		NS	vascularitis, lymph
	-	ar	angiogenesis, sexual disorders,
		ag	age-related macular
		de	degeneration, and treatment
		d/	/prevention of endometriosis
		ar	and related conditions.
		A	Additional highly preferred
		ni	indications include fibromas,
		he he	heart disease, cardiac arrest,
		) he	heart valve disease, and
		N	vascular disease.
	-	Pr	Preferred indications include
		ld	blood disorders (e.g., as
		p	described below under
		I.,	"Immune Activity", "Blood-
		R	Related Disorders", and/or
		٩	"Cardiovascular Disorders").
		Pr	Preferred indications include
		au	autoimmune diseases (e.g.,
		<b>—</b>	rheumatoid arthritis, systemic
		n <sub> </sub>	lupus erythematosis, multiple
_		38	sclerosis and/or as described

					below) and
					immunodeficiencies (e.g., as
		-			described below). Additional
					preferred indications include
					inflammation and
					inflammatory disorders (such
					as acute and chronic
					inflammatory diseases, e.g.,
					inflammatory bowel disease
					and Crohn's disease), and pain
					management.
	HPJBK12	1400	Insulin Secretion	Assays for measuring secretion	A highly preferred indication
452				of insulin are well-known in	is diabetes mellitus. An
				the art and may be used or	additional highly preferred
				routinely modified to assess	indication is a complication
				the ability of polypeptides of	associated with diabetes (e.g.,
				the invention (including	diabetic retinopathy, diabetic
				antibodies and agonists or	nephropathy, kidney disease
				antagonists of the invention) to	(e.g., renal failure,
				stimulate insulin secretion.	nephropathy and/or other
				For example, insulin secretion	diseases and disorders as
				is measured by FMAT using	described in the "Renal
				anti-rat insulin antibodies.	Disorders" section below),
				Insulin secretion from	diabetic neuropathy, nerve
				pancreatic beta cells is	disease and nerve damage
				upregulated by glucose and	(e.g., due to diabetic
				also by certain	neuropathy), blood vessel
				proteins/peptides, and	blockage, heart disease, stroke,
				disregulation is a key	impotence (e.g., due to diabetic
				component in diabetes.	neuropathy or blood vessel
				Exemplary assays that may be	blockage), seizures, mental

	used or routinely modified to	confusion, drowsiness,
	test for stimulation of insulin	nonketotic hyperglycemic-
	secretion (from pancreatic	hyperosmolar coma,
	cells) by polypeptides of the	cardiovascular disease (e.g.,
	invention (including antibodies	heart disease, atherosclerosis,
	and agonists or antagonists of	microvascular disease,
	the invention) include assays	hypertension, stroke, and other
	disclosed in: Shimizu, H., et	diseases and disorders as
	al., Endocr J, 47(3):261-9	described in the
	(2000); Salapatek, A.M., et al.,	"Cardiovascular Disorders"
	Mol Endocrinol, 13(8):1305-	section below), dyslipidemia,
	17 (1999); Filipsson, K., et al.,	endocrine disorders (as
	Ann N Y Acad Sci, 865:441-4	described in the "Endocrine
	(1998); Olson, L.K., et al., J	Disorders" section below),
	Biol Chem, 271(28):16544-52	neuropathy, vision impairment
	(1996); and, Miraglia S et. al.,	(e.g., diabetic retinopathy and
	Journal of Biomolecular	blindness), ulcers and impaired
	Screening, 4:193-204 (1999),	wound healing, and infection
	the contents of each of which	(e.g., infectious diseases and
	is herein incorporated by	disorders as described in the
	reference in its entirety.	"Infectious Diseases" section
	Pancreatic cells that may be	below, especially of the
	used according to these assays	urinary tract and skin), carpal
	are publicly available (e.g.,	tunnel syndrome and
	through the ATCC) and/or	Dupuytren's contracture).
	may be routinely generated.	An additional highly preferred
	Exemplary pancreatic cells that	indication is obesity and/or
	may be used according to these	complications associated with
	assays include HITT15 Cells.	obesity. Additional highly
	HITT15 are an adherent	preferred indications include
	epithelial cell line established	weight loss or alternatively,

			from Syrian hamster islet cells transformed with SV40. These cells express glucagon, somatostatin, and glucocorticoid receptors. The cells secrete insulin, which is stimulated by glucose and glucagon and suppressed by somatostatin or glucocorticoids. ATTC# CRL-1777 Refs: Lord and Ashcroft. Biochem. J. 219: 547-551; Santerre et al. Proc. Natl. Acad. Sci. USA 78: 4339-4343, 1981.	weight gain. Additional highly preferred indications are complications associated with insulin resistance.
HPJBK12	1400	Regulation of apoptosis of immune cells (such as mast cells).	Caspase Apoptosis. Assays for caspase apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate caspase protease-mediated apoptosis in immune cells (such as, for example, in mast cells). Mast cells are found in connective and mucosal tissues throughout the body, and their activation via immunoglobulin E-	Preferred embodiments of the invention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of asthma, allergy, hypersensitivity and inflammation.

antigen, promoted by T helper	cell type 2 cytokines, is an	important component of	allergic disease. Dysregulation	of mast cell apoptosis may	play a role in allergic disease	and mast cell tumor survival.	Exemplary assays for caspase	apoptosis that may be used or	routinely modified to test	capase apoptosis activity	induced by polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) include the	assays disclosed in: Masuda A,	et al., J Biol Chem,	276(28):26107-26113 (2001);	Yeatman CF 2nd, et al., J Exp	Med, 192(8):1093-1103	(2000);Lee et al., FEBS Lett	485(2-3): 122-126 (2000); Nor	et al., J Vasc Res 37(3): 209-	218 (2000); and Karsan and	Harlan, J Atheroscler Thromb	3(2): 75-80 (1996); the	contents of each of which are	herein incorporated by	reference in its entirety.	Immune cells that may be used	according to these assays are
				_									_																-	
																							-							

				publicly available (e.g., through commercial sources).	
				Exemplary immune cells that	
				may be used according to these	
				assays include mast cells such	
				as the HMC human mast cell	
				line.	
	HPJBK12	1400	Activation of	Kinase assay. JNK and p38	A highly preferred
452			Endothelial Cell	kinase assays for signal	embodiment of the invention
			p38 or JNK	transduction that regulate cell	includes a method for
			Signaling Pathway.	proliferation, activation, or	stimulating endothelial cell
				apoptosis are well known in	growth. An alternative highly
				the art and may be used or	preferred embodiment of the
				routinely modified to assess	invention includes a method
				the ability of polypeptides of	for inhibiting endothelial cell
				the invention (including	growth. A highly preferred
				antibodies and agonists or	embodiment of the invention
				antagonists of the invention) to	includes a method for
				promote or inhibit cell	stimulating endothelial cell
				proliferation, activation, and	proliferation. An alternative
				apoptosis. Exemplary assays	highly preferred embodiment
				for JNK and p38 kinase	of the invention includes a
				activity that may be used or	method for inhibiting
				routinely modified to test JNK	endothelial cell proliferation.
				and p38 kinase-induced	A highly preferred
		~		activity of polypeptides of the	embodiment of the invention
				invention (including antibodies	includes a method for
				and agonists or antagonists of	stimulating apoptosis of
				the invention) include the	endothelial cells. An
				assays disclosed in Forrer et	alternative highly preferred
				al., Biol Chem 379(8-9):1101-	embodiment of the invention

	1110 (1998): Gupta et al Exp	includes a method for
-	Cell Res 247(2): 495-504	
	(1999); Kyriakis JM, Biochem	
	Soc Symp 64:29-48 (1999);	
	Chang and Karin, Nature	embodiment of the invention
	410(6824):37-40 (2001); and	includes a method for
	Cobb MH, Prog Biophys Mol	
	Biol 71(3-4):479-500 (1999);	
	the contents of each of which	alternative highly preferred
	are herein incorporated by	embodiment of the invention
	reference in its entirety.	includes a method for
	Endothelial cells that may be	inhibiting (e.g., decreasing) the
	used according to these assays	
	are publicly available (e.g.,	inactivating endothelial cells.
	through the ATCC).	A highly preferred
	Exemplary endothelial cells	embodiment of the invention
	that may be used according to	includes a method for
	these assays include human	stimulating angiogenisis. An
	umbilical vein endothelial cells	
	(HUVEC), which are	embodiment of the invention
	endothelial cells which line	includes a method for
	venous blood vessels, and are	inhibiting angiogenesis. A
	involved in functions that	highly preferred embodiment
	include, but are not limited to,	, of the invention includes a
	angiogenesis, vascular	method for reducing cardiac
	permeability, vascular tone,	hypertrophy. An alternative
	and immune cell extravasation.	n.   highly preferred embodiment
		of the invention includes a
		method for inducing cardiac
		hypertrophy. Highly
		preferred indications include

se n e) sessestip diseases (e n es
1100 prastic discuss (c.g., as
described below under
"Hyperproliferative
Disorders"), and disorders of
 the cardiovascular system
(e.g., heart disease, congestive
heart failure, hypertension,
aortic stenosis,
cardiomyopathy, valvular
regurgitation, left ventricular
 dysfunction, atherosclerosis
and atherosclerotic vascular
disease, diabetic nephropathy,
intracardiac shunt, cardiac
hypertrophy, myocardial
infarction, chronic
 hemodynamic overload, and/or
as described below under
"Cardiovascular Disorders").
Highly preferred indications
include cardiovascular,
endothelial and/or angiogenic
 disorders (e.g., systemic
disorders that affect vessels
such as diabetes mellitus, as
well as diseases of the vessels
themselves, such as of the
arteries, capillaries, veins
and/or lymphatics). Highly
preferred are indications that
stimulate angiogenesis and/or

		cardiovascularization Highly
		calaio rascalai izanoni ingini
		preferred are indications that
		 inhibit angiogenesis and/or
		cardiovascularization.
		Highly preferred indications
-		include antiangiogenic activity
		to treat solid tumors,
		 leukemias, and Kaposi"s
		sarcoma, and retinal disorders.
		Highly preferred indications
		include neoplasms and cancer,
		 such as, Kaposi"s sarcoma,
		hemangioma (capillary and
		cavernous), glomus tumors,
		telangiectasia, bacillary
-		angiomatosis,
		hemangioendothelioma,
		angiosarcoma,
		haemangiopericytoma,
		lymphangioma,
		lymphangiosarcoma. Highly
		preferred indications also
		include cancers such as,
		prostate, breast, lung, colon,
		pancreatic, esophageal,
		stomach, brain, liver, and
		urinary cancer. Preferred
		indications include benign
		dysproliferative disorders and
		pre-neoplastic conditions, such
		as, for example, hyperplasia,

Highly preferred indications also include arterial disease, such as, atheroselerosis, such as, inflammatory vasculitides, Reynaud's disease, inflammatory vasculitides, Reynaud's disease, inflammatory vasculitides, Reynaud's phenomenon, aneurysms, restenosis, venous and lymphanetic disorders such as thrombophlebitis, lymphatic disorders such as thrombophlebitis, and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and rijured tissue (e.g., vascular injury such as, injury such as, implant fixation, scarring, implant fixation, scarring, is is implant fixation, scarring, is is the mia reperlission injury, retematorial arthritis, and osteoperoris. Additional highly preferred		metaplasia, and/or dysplasia.
also include arterial disease, such as, atherosclerosis, hypertension, ocronary artery disease, inflammatory vasculitides, Reynaud's pheromenon, arterysms, restenosis; venous and hymphatic disorders such as thrombophlebitis, hymphatic disorders such as hymphatic disorders such as hymphatic disorders such as peripheral vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and nijured tissue (e.g., vascular injury such as, injury resulting from balloon angiophasty, and atheroschlerotic tesions), implant fixation, scarring, implant fixation, scarring, ischemia repetiusion injury, theumatoid arthritis, cerebrovascular disease, renal dialeases such as acute renal failure, and osteoporosis. Additional highly preferred		Highly preferred indications
such as atherosclerosis, such as atherosclerosis, such as atherosclerosis, hypertension, coronary artery disease, inflammatory vasculitides, Reynaud"s disease and Reynaud"s phenomenom, aneurysms, restenosis; venous and lymphatic disorders such as thrombophiebitis, lymphatic disorders such as thrombophiebitis, and lymphangitis, and lymphangitis, and lymphangitis, and lymphangitis, and enacer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular nijured sissue (e.g., vascular nijured sissue (e.g., vascular nijured simplant fixation, scarring, implant fixation, scarring, ischemia repertision nijury, rheumatoid arthritis, cerebrovascular diseases, renal diseases such as acute enal failure, and osteoporosis. Additional highly preferred		Tighty professions
such as, atherosclerosis, hypertension, coronary artery disease, inflammatory vasculitides, Reynaud's disease and Reynaud's phenomenom, aneurysms, restenosis; venous and lymphatic disorders such as thrombophlebitis, lymphatic disorders such as peripheral vascular disorders such as peripheral vascular disorders such as peripheral vascular disorders such as vounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from all the phenomenomy and atheroschlerotic lesions), implant fixation applaty, and atheroschlerotic lesions), implant fixation and old athritis, cerebrovascular diseases, rena diseases such as acute renal failure, and osteoporosis. Additional highly preferred		also include arterial disease,
disease, inflammatory vasculitides, Reynaud"s disease, inflammatory vasculitides, Reynaud"s disease and Reynaud"s phenomenom, aneurysms, restenosis; venous and lymphatic disorders such as thrombophlebitis, lymphangitis, and lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured trauma such as wounds, burns, and injured trauma such as include trauma such as wounds, burns, and injured trauma such as injury resulting from balloon angiophasy, and atheroschleroite lesions), implant fixation, scarring, isolemia reperfusion injury, rheumatoid arthritis, cerethrovascular diseases such as acute renal failure, and osteoporosis. Additional highly preferred		such as, atherosclerosis,
disease, inflammatory vascultificis, Reynaud's disease and Reynaud's phenomenon, aneurysms, restenosis; venous and lymphatic disorders such as thrombophebitis, lymphaedema; and other vascular disorders such as peripheral vascular disorders such as peripheral vascular disorders such as peripheral vascular disorders such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroscherotic (estons), implant fixation, scarring, implant fixation, scarring, ischemia repertusion injury, theumatoid arthritis, cerebrovascular disease, renal diseases such as scutte renal failure, and osteoporosis. Additional highly preferred		hypertension, coronary artery
vasculitides, Reynaud's disease and Reynaud's phenomenon, aneurysms, restenosis, venous and lymphatic disorders such as thrombophlebitis, lymphatic disorders such as thrombophlebitis, lymphatic disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		disease, inflammatory
disease and Reynaud"s phenomenom, aneurysms, restenosis; verous and lymphatic disorders such as thrombophlebitis, lymphadema; and other vascular disorders such as peripheral vascular disorders such as peripheral vascular disorders such as peripheral vascular disorders such as wounds, burns, and injured tissue (c.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and ostcoporosis. Additional highly preferred		vasculitides, Reynaud"s
phenomenom, aneurysms, restenosis; venous and lymphatic disorders such as thrombophlebits, lymphatedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, rijury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, searring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		disease and Reynaud"s
restenosis; venous and lymphatic disorders such as thrombophlebitis, lymphangitis, and lymphangitis, and lymphangitis, and lymphedem; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, searring, ischemia reportusion injury, rheumatoid arthritis, cerebrovascular diseases, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		phenomenom, aneurysms,
lymphatic disorders such as thrombophlebits, lymphagitis, and lymphagitis, and lymphagitis, and lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angiophasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute creal failure, and osteoporosis. Additional highly preferred		restenosis; venous and
thrombophlebitis, lymphangitis, and lymphangitis, and lymphedema; and other vascular discase, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred	-	lymphatic disorders such as
lymphangitis, and lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic (esions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		thrombophlebitis,
lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular diseases, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		lymphangitis, and
vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		lymphedema; and other
peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injurd tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		vascular disorders such as
and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		peripheral vascular disease,
preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia repertusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		and cancer. Highly
include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		preferred indications also
wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		include trauma such as
tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		wounds, burns, and injured
such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		tissue (e.g., vascular injury
balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		such as, injury resulting from
atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		balloon angioplasty, and
implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		atheroschlerotic lesions),
ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		implant fixation, scarring,
rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred		ischemia reperfusion injury,
cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		rheumatoid arthritis,
diseases such as acute renal failure, and osteoporosis.  Additional highly preferred		cerebrovascular disease, renal
failure, and osteoporosis.  Additional highly preferred		diseases such as acute renal
Additional highly preferred		failure, and osteoporosis.
		Additional highly preferred

		indications include stroke,
		graft rejection, diabetic or other retinopathies, thrombotic
	8	and coagulative disorders,
	 ,	vascularitis, lymph
	 0	angiogenesis, sexual disorders,
	8	age-related macular
	 5	degeneration, and treatment
		/prevention of endometriosis
	 8	and related conditions.
	7	Additional highly preferred
	 <u></u>	indications include fibromas,
	 4	heart disease, cardiac arrest,
	4	heart valve disease, and
_	 _	vascular disease.
	 <u></u>	Preferred indications include
	<del>1</del>	blood disorders (e.g., as
	0	described below under
	3	"Immune Activity", "Blood-
	<u> </u>	Related Disorders", and/or
	=	"Cardiovascular Disorders").
	 <u> </u>	Preferred indications include
	- 8	autoimmune diseases (e.g.,
	<u> </u>	rheumatoid arthritis, systemic
		lupus erythematosis, multiple
	S	sclerosis and/or as described
		below) and
		immunodeficiencies (e.g., as
		described below). Additional
		preferred indications include
	-	inflammation and

					inflammatory disorders (such
					as acute and chilolite inflammatory diseases, e.g.,
					inflammatory bowel disease
					and Crohn's disease), and pain
					management.
	HPJCL22	1401	Activation of	Kinase assay. Kinase assays,	A highly preferred
453			Adipocyte ERK	for example an Elk-1 kinase	embodiment of the invention
			Signaling Pathway	assay, for ERK signal	includes a method for
				transduction that regulate cell	stimulating adipocyte
				proliferation or differentiation	proliferation. An alternative
				are well known in the art and	highly preferred embodiment
				may be used or routinely	of the invention includes a
				modified to assess the ability	method for inhibiting
				of polypeptides of the	adipocyte proliferation. A
				invention (including antibodies	highly preferred embodiment
				and agonists or antagonists of	of the invention includes a
				the invention) to promote or	method for stimulating
				inhibit cell proliferation,	adipocyte differentiation. An
				activation, and differentiation.	alternative highly preferred
				Exemplary assays for ERK	embodiment of the invention
				kinase activity that may be	includes a method for
				used or routinely modified to	inhibiting adipocyte
				test ERK kinase-induced	differentiation. A highly
				activity of polypeptides of the	preferred embodiment of the
				invention (including antibodies	invention includes a method
				and agonists or antagonists of	for stimulating (e.g.,
				the invention) include the	increasing) adipocyte
				assays disclosed in Forrer et	activation. An alternative
				al., Biol Chem 379(8-9):1101-	highly preferred embodiment
				1110 (1998); Le Marchand-	of the invention includes a

	Brustel Y, Exp Clin	xp Clin	method for inhibiting the
	Endocrinol Diabetes	) jabetes	activation of (e.g., decreasing)
	107(2):126-132 (1999);	(32 (1999);	and/or inactivating adipocytes.
	Kyriakis JM,	Kyriakis JM, Biochem Soc	Highly preferred indications
	Symp 64:29-	Symp 64:29-48 (1999); Chang	include endocrine disorders
	and Karin, Nature	ature	(e.g., as described below under
	410(6824):37	410(6824):37-40 (2001); and	"Endocrine Disorders").
	Cobb MH, Pi	Cobb MH, Prog Biophys Mol	Highly preferred indications
	Biol 71(3-4):	Biol 71(3-4):479-500 (1999);	also include neoplastic
	the contents of	the contents of each of which	diseases (e.g., lipomas,
	are herein inc	are herein incorporated by	liposarcomas, and/or as
	reference in its entirety	its entirety.	described below under
	Mouse adipo	Mouse adipocyte cells that	"Hyperproliferative
	may be used	may be used according to these	Disorders"). Preferred
	assays are pu	assays are publicly available	indications include blood
	(e.g., through	(e.g., through the ATCC).	disorders (e.g., hypertension,
	Exemplary m	Exemplary mouse adipocyte	congestive heart failure, blood
	cells that may be used	y be used	vessel blockage, heart disease,
	according to these assays	these assays	stroke, impotence and/or as
	include 3T3-	include 3T3-L1 cells. 3T3-L1	described below under
	is an adherent mouse	it mouse	"Immune Activity",
	preadipocyte	preadipocyte cell line that is a	"Cardiovascular Disorders",
	continuous su	continuous substrain of 3T3	and/or "Blood-Related
	fibroblast cel	fibroblast cells developed	Disorders"), immune disorders
	through clona	through clonal isolation and	(e.g., as described below under
	undergo a pre	undergo a pre-adipocyte to	"Immune Activity"), neural
	adipose-like	adipose-like conversion under	disorders (e.g., as described
	appropriate d	appropriate differentiation	below under "Neural Activity
	conditions kr	conditions known in the art.	and Neurological Diseases"),
			and infection (e.g., as
:			described below under

A highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve diseases and nerve damage (e.g., due to diabetic neuropathy and disease, stroke, importence (e.g., due to diabetic neuropathy or blood vessel blookage, heard disease, stroke, importence (e.g., due to diabetic neuropathy or blood vessel blookage, seatures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar cisease, the rear disease, at the calciovascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular disease,"			"Infectious Disease").
is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy and/or other disease and nerve disease and nerve diabetic neuropathy, blood vessel blockage, heart disease, siroke, impotence (e.g., due to diabetic neuropathy) blood vessel blockage, heart disease, siroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage, heart disease, siroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental continsion, drowsiness, nonketotic hyperglycemic—hypercosmolar coma, cardiovascular disease (e.g., heart disease, dueroselerosii, heart disease, and disorders as described in the "Cardiovascular diseases")		 	A highly preferred indication
additional highly preferred indication is a complication associated with diabetic emphropathy, didney disease (e.g., renal failure, nephropathy, and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, inclored, disease and nerve disease, impotence (e.g., due to diabetic neuropathy) brothypathy, blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage, seatzures, mental confusion, drowsiness, nonfusion, drowsiness, nonfusion, drowsiness, nonfusion, drowsiness, described in the diseases and disorders as described in the "Cardiovascular Disorders"			is diabetes mellitus. An
indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve danage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperesynoler, hyperosmolar coma, cardiovascular disease, alteroselerosis, microvascular disease, alteroselerosis, hypertension, stroke, and other disease, and disorders as described in the "Cardiovascular Disorders"			additional highly preferred
associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renaf failure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy and or other disease and nerve disease and nerve disease and nerve disease, and nerve disease, and nerve diabetic neuropathy, nerve disease, and nerve diabetic neuropathy, blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy, or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemichypercosmolar coma, cardiovascular disease, hypertension, stroke, and other diseases, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			indication is a complication
diabetic retinopathy, diabetic nephropathy, kidney disease  (e.g., renal failure, nephropathy, kidney disease, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy), blood vessel blockage, seizures, mental confusion, drowsiness, nonketotic hyperglycemichyperosanolar coma, cardiovascular disease, theart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			associated with diabetes (e.g.,
nephropathy, kidney disease  (e.g., renal failure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve dianese (e.g., due to diabetic neuropathy) blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease, atherosclerosis, microvascular disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	diabetic retinopathy, diabetic
nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy) to blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemichyperosmolar coma, cardiovascular disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders" ("Cardiovascular Disorders")			nephropathy, kidney disease
nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy) blood vessel blockage, seizures, mental confusion, drowsiness, nonketotic hyperosmolar coma, cardiovascular disease (e.g., heart disease, alterosclerosis, microvascular disease, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	(e.g., renal failure,
diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atheroselerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			nephropathy and/or other
described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., hypertension, stroke, and other diseases and disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			diseases and disorders as
Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blookage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blookage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hypersmolar coma, cardiovascular disease (e.g., heart disease, atheroselerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			described in the "Renal
diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., hart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"	, Mes	 	Disorders" section below),
disease and nerve damage  (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		-	diabetic neuropathy, nerve
(e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemichyperosmolar coma, cardiovascular disease (e.g., hart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			disease and nerve damage
neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			(e.g., due to diabetic
blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemichyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	neuropathy), blood vessel
impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic-hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			blockage, heart disease, stroke,
neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	impotence (e.g., due to diabetic
blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			neuropathy or blood vessel
confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 -	blockage), seizures, mental
nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	confusion, drowsiness,
hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	nonketotic hyperglycemic-
cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			hyperosmolar coma,
heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"			cardiovascular disease (e.g.,
microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	heart disease, atherosclerosis,
hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"		 	microvascular disease,
diseases and disorders as described in the "Cardiovascular Disorders"			hypertension, stroke, and other
described in the "Cardiovascular Disorders"			diseases and disorders as
"Cardiovascular Disorders"			described in the
		 	"Cardiovascular Disorders"

described in the "Endocrine Disorders" section below), neuropathy, vision impairment (e.g., diabetic retinopathy and blindness), luces and impairment elegacy, vision impairment (e.g., diabetic retinopathy and blindness), luces and impaired wound healing, infection (e.g., infectious Diseases and disorders as described in the "Infectious Diseases" section below (particularly of the urinary tract and skin). An additional highly preferred indications associated with obesity. Additional highly preferred indications associated with insulin resistance.  Additional highly preferred indications are complications are clonditional highly preferred indications are complications are clonditional highly preferred indications are disorders of the musculos/cleal systems indications are disorders of the muscular dystrophy, and/or as described herein.  Additional highly preferred indications are disorders of the muscular dystrophy, and/or as described herein.  Additional highly preferred indications include, indications include, indications include, indications include.		section below), dyslipidemia,
described in the "Endocrine Disorders" section below), neuropathy, vision impairme (e.g., diabetic retinopathy an blindness), uters and impair wound healing, infection (e.g. infectious diseases and inpair wound healing, infection (e.g. infectious diseases and disorders as described in the "Infectious Diseases" section below (particularly of the uniany tract and skin). A additional highly preferred indications is obesity, additional highly preferred indications include weight gain. Additional highly preferred indications associated wit insulin resistance. Additional highly preferred indications are disorders of muscular dystems including myopathies, muscular dystrophy, and/or t described herein. Additional highly preferred indications include, indications highly preferred indications include, described herein.		endocrine disorders (as
Disorders" section below), neuropathy, vision impairme (e.g., diabetic retinopathy an binindress), ulcers and impair wound healing, infection (e.g. infectious diseases and disorders as described in the "Infectious Diseases" section below (particularly of the urinary tract and skin). A additional highly preferred indication is obesity andor complications associated wit obesity. Additional highly preferred indications include weight gain. Additiona highly preferred indications include weight gain. Additional highly preferred indications complications associated wit insulin resistance.  Additional highly preferred indications are disorders of t muscular dystrophy, and/or: described herein. Additional highly preferred indications are disorders of t discribed herein.		described in the "Endocrine
(e.g., diabetic retinopathy an blindness), ulcers and impairme blindness), ulcers and impair wound healing, infection (e.g. diabetic retinopathy an blindness), ulcers and impair wound healing, infection (e.g. diabetic as described in the "Infectious Diseases" section below (particularly) of the urinary tract and skin). A additional highly preferred indications associated with obesity. Additional highly preferred indications include weight loss or alternatively, weight gain. Additional highly preferred indications include insulin resistance.  Additional highly preferred indications associated with insulin resistance.  Additional highly preferred indications are disorders of discribed herein.  Additional highly preferred indications include, indications include,		Disorders" section below),
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complications associated wit insulin resistance.  Additional highly preferred indications are disorders of trunsculoskeletal systems including myopathies, muscular dystrophy, and/or a described herein.  Additional highly preferred indications include,		highly preferred indications are
Additional highly preferred indications are disorders of the musculoskeletal systems including myopathies, muscular dystrophy, and/or described herein.  Additional highly preferred indications include,		complications associated with
Additional highly preferred indications are disorders of the musculoskeletal systems including myopathies, muscular dystrophy, and/or a described herein.  Additional highly preferred indications include,		insulin resistance.
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musculoskeletal systems including myopathies, muscular dystrophy, and/or a described herein. Additional highly preferred indications include,		indications are disorders of the
including myopathies, muscular dystrophy, and/or a described herein. Additional highly preferred indications include,		musculoskeletal systems
muscular dystrophy, and/or a described herein. Additional highly preferred indications include,		including myopathies,
described herein. Additional highly preferred indications include,		muscular dystrophy, and/or as
Additional highly preferred indications include,		described herein.
indications include,		Additional highly preferred
		indications include,

1					hypertension, coronary artery
					disease, dyslipidemia,
	-				gallstones, osteoarthritis,
					degenerative arthritis, eating
					disorders, fibrosis, cachexia,
	-				and kidney diseases or
					disorders. Preferred
	·				indications include neoplasms
					and cancer, such as,
					lymphoma, leukemia and
					breast, colon, and kidney
					cancer. Additional preferred
					indications include melanoma,
					prostate, lung, pancreatic,
					esophageal, stomach, brain,
÷					liver, and urinary cancer.
					Highly preferred indications
					include lipomas and
		_			liposarcomas. Other preferred
					indications include benign
					dysproliferative disorders and
					pre-neoplastic conditions, such
					as, for example, hyperplasia,
				!	metaplasia, and/or dysplasia.
453	HPJCL22	1401	CD152 in Human T		
	HPJCL22	1401	IL-8 in Normal		
453			Human Bronchial		
			Epitheliae		
	HPJCW04	1402	Production of TNF	TNFa FMAT. Assays for	A highly preferred
454			alpha by dendritic	immunomodulatory proteins	embodiment of the invention

cells	produced by activated	includes a method for
	macrophages, T cells,	inhibiting (e.g., decreasing)
	fibroblasts, smooth muscle,	TNF alpha production. An
	and other cell types that exert a	alternative highly preferred
	wide variety of inflammatory	embodiment of the invention
	and cytotoxic effects on a	includes a method for
	variety of cells are well known	stimulating (e.g., increasing)
	in the art and may be used or	TNF alpha production.
	routinely modified to assess	Highly preferred indications
	the ability of polypeptides of	include blood disorders (e.g.,
	the invention (including	as described below under
	antibodies and agonists or	"Immune Activity", "Blood-
	antagonists of the invention) to	Related Disorders", and/or
	mediate immunomodulation,	"Cardiovascular Disorders"),
	modulate inflammation and	Highly preferred indications
	cytotoxicity. Exemplary	include autoimmune diseases
	assays that test for	(e.g., rheumatoid arthritis,
	immunomodulatory proteins	systemic lupus erythematosis,
	evaluate the production of	Crohn"s disease, multiple
	cytokines such as tumor	sclerosis and/or as described
	necrosis factor alpha (TNFa),	below), immunodeficiencies
	and the induction or inhibition	(e.g., as described below),
	of an inflammatory or	boosting a T cell-mediated
	cytotoxic response. Such	immune response, and
_	assays that may be used or	suppressing a T cell-mediated
	routinely modified to test	immune response. Additional
	immunomodulatory activity of	highly preferred indications
	polypeptides of the invention	include inflammation and
	(including antibodies and	inflammatory disorders, and
	agonists or antagonists of the	treating joint damage in
	invention) include assays	patients with rheumatoid

		disclosed in Miraglia et al J	arthritis. An additional highly
-		Biomolecular Screening 4:193-	preferred indication is sepsis.
		204(1999); Rowland et al.,	Highly preferred indications
		"Lymphocytes: a practical	include neoplastic diseases
		approach" Chapter 6:138-160	(e.g., leukemia, lymphoma,
		(2000); Verhasselt et al., Eur J	and/or as described below
		Immunol 28(11):3886-3890	under "Hyperproliferative
	-	(1198); Dahlen et al., J	Disorders"). Additionally,
		Immunol 160(7):3585-3593	highly preferred indications
	-	(1998); Verhasselt et al., J	include neoplasms and
		Immunol 158:2919-2925	cancers, such as, leukemia,
		(1997); and Nardelli et al., J	lymphoma, melanoma, glioma
		Leukoc Biol 65:822-828	(e.g., malignant glioma), solid
		(1999), the contents of each of	tumors, and prostate, breast,
		which are herein incorporated	lung, colon, pancreatic,
		by reference in its entirety.	esophageal, stomach, brain,
		Human dendritic cells that may	liver and urinary cancer. Other
		be used according to these	preferred indications include
		assays may be isolated using	benign dysproliferative
		techniques disclosed herein or	disorders and pre-neoplastic
		otherwise known in the art.	conditions, such as, for
		Human dendritic cells are	example, hyperplasia,
		antigen presenting cells in	metaplasia, and/or dysplasia.
		suspension culture, which,	Preferred indications include
		when activated by antigen	anemia, pancytopenia,
		and/or cytokines, initiate and	leukopenia, thrombocytopenia,
		upregulate T cell proliferation	Hodgkin's disease, acute
		and functional activities.	lymphocytic anemia (ALL),
			plasmacytomas, multiple
			myeloma, Burkitt's lymphoma,
			arthritis, AIDS, granulomatous

	HPJCW04 HPJEX20	1402	SEAP in OE-21 SEAP in NK16/STAT6		disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
<u></u>	HPMAI22	1404	Activation of transcription through cAMP response element (CRE) in preadipocytes.	Assays for the activation of transcription through the cAMP response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to increase cAMP, regulate CREB transcription factors, and modulate	A highly preferred indication is obesity and/or complications associated with obesity. Additional highly preferred indications include weight loss or alternatively, weight gain. An additional highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic

		expression of genes involved	nephropathy, kidney disease
		in a wide variety of cell	(e.g., renal failure,
		functions. For example, a	nephropathy and/or other
		3T3-L1/CRE reporter assay	diseases and disorders as
		may be used to identify factors	described in the "Renal
		that activate the cAMP	Disorders" section below),
		signaling pathway. CREB	diabetic neuropathy, nerve
		plays a major role in	disease and nerve damage
		adipogenesis, and is involved	(e.g., due to diabetic
		in differentiation into	neuropathy), blood vessel
		adipocytes. CRE contains the	blockage, heart disease, stroke,
		binding sequence for the	impotence (e.g., due to diabetic
		transcription factor CREB	neuropathy or blood vessel
		(CRE binding protein).	blockage), seizures, mental
		Exemplary assays for	confusion, drowsiness,
		transcription through the	nonketotic hyperglycemic-
		cAMP response element that	hyperosmolar coma,
	-	may be used or routinely	cardiovascular disease (e.g.,
		modified to test cAMP-	heart disease, atherosclerosis,
		response element activity of	microvascular disease,
		polypeptides of the invention	hypertension, stroke, and other
		(including antibodies and	diseases and disorders as
	-	agonists or antagonists of the	described in the
		invention) include assays	"Cardiovascular Disorders"
		disclosed in Berger et al., Gene	section below), dyslipidemia,
		66:1-10 (1998); Cullen and	endocrine disorders (as
		Malm, Methods in Enzymol	described in the "Endocrine
		216:362-368 (1992); Henthorn	Disorders" section below),
		et al., Proc Natl Acad Sci USA	neuropathy, vision impairment
		85:6342-6346 (1988); Reusch	(e.g., diabetic retinopathy and
	!	et al., Mol Cell Biol	blindness), ulcers and impaired

					20(3):1008-1020 (2000); and	wound healing, and infection
contents of each of which are ontents of each of which are a contents of each of which are 1 adipocytes that may be used according to these assays are publicly available (e.g., and through the ATCC) and/or in may be routinely generated. The publicity available (e.g., and through the ATCC) and/or in may be routinely generated. The publicity available (e.g., and through the ATCC) and/or in may be routinely generated. The publicity available (e.g., and through a second in that is a cells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of Assays for the activation of transcription through the min through NFKB response element are in through NFKB immune cells (such be used or routinely modified in an T-cells).					Klemm et al., J Biol Chem	(e.g., infectious diseases and
contents of each of which are "I"  herein incorporated by reference in its entirety. Pre- un adipocytes that may be used according to these assays are publicly available (e.g., in may be routinely generated. as Exemplary mouse adipocyte recells that may be used according to these assays include 3T3-L1 cells, 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of transcription through the timough NFKB response element are in through NFKB response element are in through NFKB response element are in through NFKB be used or routinely modified in to assess the ability of all polypeptides of the invention "I"					273:917-923 (1998), the	disorders as described in the
herein incorporated by reference in its entirety. Preadjoocytes that may be used according to these assays are D publicly available (e.g., A through the ATCC) and/or may be routinely generated. Beemplary mouse adipocyte recells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMA122 1404 Activation of Assays for the activation of transcription through the in through NFKB Response element are in response element in well-known in the art and may immune cells (such assess the ability of a sessess the ability of a solvapetides of the invention 1")					contents of each of which are	"Infectious Diseases" section
reference in its entirety. Pre- un adipocytes that may be used according to these assays are publicly available (e.g., through the ATCC) and/or in may be routinely generated. Through the ATCC) and/or in may be routinely generated. Through the ATCC) and/or in may be routinely generated. Through continuous adipocyte recells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAIZ2 1404 Activation of Assays for the activation of transcription through the inn through NFKB response element are inn response element in well-known in the art and may immune cells (such be used or routinely modified an inpulse of the invention of the					herein incorporated by	below, especially of the
adipocytes that may be used according to these assays are publicly available (e.g., A through the ATCC) and/or in may be routinely generated. as Exemplary mouse adipocyte rells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipocyte to adipocy					reference in its entirety. Pre-	urinary tract and skin), carpal
according to these assays are D publicly available (e.g., A through the ATCC) and/or in may be routinely generated. Bxemplary mouse adipocyte rells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyt cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of Assays for the activation of transcription through the infinitumune cells (such assess the ability of a polypoptides of the invention 1.					adipocytes that may be used	tunnel syndrome and
publicly available (e.g., A through the ATCC) and/or in may be routinely generated. as Exemplary mouse adipocyte recells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of Assays for the activation of transcription through the in through NFKB response element are in through NFKB response element in the art and may immune cells (such as seess the ability of as public as T-cells).					according to these assays are	Dupuytren's contracture).
through the ATCC) and/or in may be routinely generated. as Exemplary mouse adjocyte recells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adjocyte to adjocyclike conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of Assays for the activation of transcription through the in through NFKB response element are in through NFKB response element are in the art and may immune cells (such be used or routinely modified in to assess the ability of as a polypeptides of the invention ""					publicly available (e.g.,	Additional highly preferred
may be routinely generated. as Exemplary mouse adipocyte recells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of transcription through the interpretation in the art and may immune cells (such be used or routinely modified in to assess the ability of as polymentides of the invention '''.					through the ATCC) and/or	indications are complications
Exemplary mouse adipocyte recells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of transcription through the influence cells (such be used or routinely modified in as T-cells).					may be routinely generated.	associated with insulin
cells that may be used according to these assays include 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMA122 1404 Activation of Assays for the activation of transcription transcription through the in through NFKB response element are response element in well-known in the art and may himmune cells (such to assess the ability of as polypeptides of the invention ""					Exemplary mouse adipocyte	resistance.
according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  Activation of Assays for the activation of transcription through NFKB response element are response element in immune cells (such as T-cells). polypeptides of the invention ""					cells that may be used	
include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of Assays for the activation of transcription through the in through NFKB response element are in through NFKB immune cells (such be used or routinely modified in in as T-cells).					according to these assays	
is an adherent mouse  preadipocyte cell line that is a  continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  Activation of transcription through NFKB NFKB response element are response element in immune cells (such to assess the ability of as T-cells).  preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells in the that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substrain of 3T3 fibroblast cell line that is a continuous substr					include 3T3-L1 cells. 3T3-L1	
HPMAI22 1404 Activation of transcription through NFKB response element and through NFKB as T-cells).					is an adherent mouse	
fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  HPMAI22 1404 Activation of transcription transcription through NFKB transcription through NFKB response element are in response element in immune cells (such as T-cells).					preadipocyte cell line that is a	
HPMA122 1404 Activation of transcription transcription through NFKB response element in the art and may immune cells (such assess the ability of as T-cells).					continuous substrain of 3T3	
HPMA122 1404 Activation of transcription through NFKB response element in immune cells (such as T-cells).					fibroblast cells developed	
HPMAI22 1404 Activation of transcription through the immune cells (such as T-cells).  Undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.  Activation of Assays for the activation of transcription through the incomplete of the invention in the art and may himmune cells (such as polypeptides of the invention "I polypeptides of the inv					through clonal isolation and	
HPMAI22 1404 Activation of transcription through NFKB response element in response element in munne cells (such as T-cells).					undergo a pre-adipocyte to	
HPMAI22 1404 Activation of Assays for the activation of transcription through NFKB response element are improved immune cells (such as T-cells).					adipose-like conversion under	
HPMAI22 1404 Activation of Assays for the activation of transcription through the in through NFKB response element are in response element in well-known in the art and may immune cells (such as T-cells).					appropriate differentiation	
HPMAI22 1404 Activation of transcription through the transcription through the transcription through the transcription through the through NFKB response element are in response element in well-known in the art and may immune cells (such as T-cells).			!		conditions known in the art.	
transcription transcription transcription transcription transcription transcription through the NFKB response element are response element in well-known in the art and may immune cells (such as T-cells).  polypeptides of the invention		HPMAI22	1404	Activation of	Assays for the activation of	Highly preferred indications
NFKB response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention	456			transcription	transcription through the	include inflammation and
well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				through NFKB	NFKB response element are	inflammatory disorders.
be used or routinely modified to assess the ability of polypeptides of the invention				response element in	well-known in the art and may	Highly preferred indications
to assess the ability of polypeptides of the invention				immune cells (such	be used or routinely modified	include blood disorders (e.g.,
				as T-cells).	to assess the ability of	as described below under
					polypeptides of the invention	"Immune Activity", "Blood-

(including antibodies and	Related Disorders", and/or
agonists or antagonists of the	"Cardiovascular Disorders").
invention) to regulate NFKB	Highly preferred indications
 transcription factors and	include autoimmune diseases
modulate expression of	(e.g., rheumatoid arthritis,
immunomodulatory genes.	systemic lupus erythematosis,
Exemplary assays for	multiple sclerosis and/or as
transcription through the	described below), and
NFKB response element that	immunodeficiencies (e.g., as
may be used or rountinely	described below). An
modified to test NFKB-	additional highly preferred
response element activity of	indication is infection (e.g.,
polypeptides of the invention	AIDS, and/or an infectious
(including antibodies and	disease as described below
agonists or antagonists of the	under "Infectious Disease").
invention) include assays	Highly preferred indications
disclosed in Berger et al., Gene	include neoplastic diseases
66:1-10 (1998); Cullen and	(e.g., melanoma, leukemia,
Malm, Methods in Enzymol	lymphoma, and/or as described
216:362-368 (1992); Henthorn	below under
et al., Proc Natl Acad Sci USA	"Hyperproliferative
85:6342-6346 (1988); Black et	Disorders"). Highly preferred
al., Virus Gnes 15(2):105-117	indications include neoplasms
(1997); and Fraser et al.,	and cancers, such as, for
29(3):838-844 (1999), the	example, melanoma, renal cell
contents of each of which are	carcinoma, leukemia,
herein incorporated by	lymphoma, and prostate,
reference in its entirety.	breast, lung, colon, pancreatic,
Exemplary human T cells,	esophageal, stomach, brain,
such as the MOLT4, that may	liver and urinary cancer. Other
be used according to these	preferred indications include

		(e.g., through the ATCC).	disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia.
			conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia.
			example, hyperplasia, metaplasia, and/or dysplasia.
			metaplasia, and/or dysplasia.
			Dreferred indications also
			I ICICII III III III III III III III II
			include anemia, pancytopenia,
			leukopenia, thrombocytopenia,
			Hodgkin's disease, acute
			lymphocytic anemia (ALL),
			plasmacytomas, multiple
			myeloma, Burkitt's lymphoma,
			arthritis, AIDS, granulomatous
			disease, inflammatory bowel
			disease, sepsis, neutropenia,
			neutrophilia, psoriasis,
			hemophilia, hypercoagulation,
			diabetes mellitus, endocarditis,
			meningitis, Lyme Disease,
			suppression of immune
			reactions to transplanted
			organs, asthma and allergy.
HPMFP40 1405	Activation of	Assays for the activation of	A preferred embodiment of
457	transcription	transcription through the	the invention includes a
	through serum	Serum Response Element	method for inhibiting (e.g.,
	response element in	(SRE) are well-known in the	reducing) TNF alpha
	immune cells (such	art and may be used or	production. An alternative
	as T-cells).	routinely modified to assess	preferred embodiment of the
		the ability of polypeptides of	invention includes a method
		the invention (including	for stimulating (e.g.,
		antibodies and agonists or	increasing) TNF alpha

antagonists of 1	antagonists of the invention) to	production. Preferred
regulate the serum response	um response	indications include blood
factors and modulate the	dulate the	disorders (e.g., as described
expression of genes involved	enes involved	below under "Immune
in growth. Exemplary assays	mplary assays	Activity", "Blood-Related
for transcription through the	n through the	Disorders", and/or
SRE that may be used or	be used or	"Cardiovascular Disorders"),
routinely modi	routinely modified to test SRE	Highly preferred indications
activity of the	activity of the polypeptides of	include autoimmune diseases
the invention (including	ncluding	(e.g., rheumatoid arthritis,
antibodies and agonists or	agonists or	systemic lupus erythematosis,
antagonists of the invention)	he invention)	Crohn"s disease, multiple
include assays disclosed in	disclosed in	sclerosis and/or as described
Berger et al., Gene 66:1-10	ene 66:1-10	below), immunodeficiencies
(1998); Cullen and Malm,	and Malm,	(e.g., as described below),
Methods in En	Methods in Enzymol 216:362-	boosting a T cell-mediated
368 (1992); Henthorn et al.,	nthorn et al.,	immune response, and
Proc Natl Acad Sci USA	Sci USA	suppressing a T cell-mediated
85:6342-6346 (1988); and	1988); and	immune response. Additional
Black et al., Virus Genes	rus Genes	highly preferred indications
12(2):105-117 (1997), the	(1997), the	include inflammation and
content of each of which are	of which are	inflammatory disorders, and
herein incorporated by	ated by	treating joint damage in
reference in its entirety.	entirety. T	patients with rheumatoid
cells that may be used	e nsed	arthritis. An additional highly
according to these assays are	ese assays are	preferred indication is sepsis.
publicly available (e.g.,	ole (e.g.,	Highly preferred indications
through the ATCC)	CC).	include neoplastic diseases
Exemplary mo	Exemplary mouse T cells that	(e.g., leukemia, lymphoma,
may be used ac	may be used according to these	and/or as described below
assays include the CTLL cell	the CTLL cell	under "Hyperproliferative

line, which is an IL-2	Disorders"). Additionally,
dependent suspension culture	highly preferred indications
of T cells with cytotoxic	include neoplasms and
activity.	cancers, such as, for example,
	leukemia, lymphoma,
	melanoma, glioma (e.g.,
	malignant glioma), solid
	tumors, and prostate, breast,
	lung, colon, pancreatic,
	esophageal, stomach, brain,
	liver and urinary cancer. Other
	preferred indications include
	benign dysproliferative
	disorders and pre-neoplastic
	conditions, such as, for
	example, hyperplasia,
	metaplasia, and/or dysplasia.
	Preferred indications include
	anemia, pancytopenia,
	leukopenia, thrombocytopenia,
	Hodgkin's disease, acute
	lymphocytic anemia (ALL),
	plasmacytomas, multiple
	myeloma, Burkitt's lymphoma,
	arthritis, AIDS, granulomatous
	disease, inflammatory bowel
	disease, neutropenia,
	neutrophilia, psoriasis,
	suppression of immune
	reactions to transplanted
	organs and tissues,

					hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
458	HPMGJ45	1406	CD152 in Human T cells		
459	НРQАС69	1407	SEAP in 3T3L1		
459	HPQAC69	1407	CD152 in Human T cells		
460	HPRBC80	1408	SEAP in HIB/CRE		
460	HPRBC80	1408	Activation of transcription	This reporter assay measures activation of the GATA-3	Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
	-		immune cells (such as mast cells).	Activation of GATA-3 in mast cells has been linked to	(e.g., an infectious disease as described below under
				cytokine and chemokine production. Assays for the	"Infectious Disease"), and inflammation and
				activation of transcription	inflammatory disorders.
				element are well-known in the	include blood disorders (e.g.,
				art and may be used or	as described below under
				routinely modified to assess the ability of polypeptides of	"Immune Activity", "Blood-Related Disorders", and/or

	the invention (including	"Cardiovascular Disorders").
	antibodies and agonists or	Preferred indications include
	antagonists of the invention) to	autoimmune diseases (e.g.,
	regulate GATA3 transcription	rheumatoid arthritis, systemic
	factors and modulate	lupus erythematosis, multiple
	expression of mast cell genes	sclerosis and/or as described
	important for immune response	below) and
	development. Exemplary	immunodeficiencies (e.g., as
	assays for transcription	described below). Preferred
	through the GATA3 response	indications include neoplastic
	element that may be used or	diseases (e.g., leukemia,
	routinely modified to test	lymphoma, melanoma,
	GATA3-response element	prostate, breast, lung, colon,
	activity of polypeptides of the	pancreatic, esophageal,
	invention (including antibodies	stomach, brain, liver, and
	and agonists or antagonists of	urinary tract cancers and/or as
	the invention) include assays	described below under
	disclosed in Berger et al., Gene	"Hyperproliferative
	66:1-10 (1998); Cullen and	Disorders"). Other preferred
	Malm, Methods in Enzymol	indications include benign
	216:362-368 (1992); Henthorn	dysproliferative disorders and
	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
	Quant Biol 64:563-571 (1999);	Preferred indications include
	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
	J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
	(1999); Zheng and Flavell,	Ieukemias, Hodgkin's disease,
	Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
	14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's

				contents of each of which are	lymphoma, arthritis, AIDS,
				herein incorporated by	granulomatous disease,
				reference in its entirety. Mast	inflammatory bowel disease,
				cells that may be used	sepsis, neutropenia,
				according to these assays are	neutrophilia, psoriasis,
				publicly available (e.g.,	suppression of immune
				through the ATCC).	reactions to transplanted
				Exemplary human mast cells	organs and tissues, hemophilia,
				that may be used according to	hypercoagulation, diabetes
				these assays include the HMC-	mellitus, endocarditis,
				1 cell line, which is an	meningitis, and Lyme Disease.
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HPRBC80	1408	Activation of	This reporter assay measures	Highly preferred indications
460			transcription	activation of the NFAT	include allergy, asthma, and
			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
-			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the Nuclear Factor of	Preferred indications also
				Activated T cells (NFAT)	include blood disorders (e.g.,
				response element are well-	as described below under
				known in the art and may be	"Immune Activity", "Blood-
				used or routinely modified to	Related Disorders", and/or

	assess the ability of	"Cardiovascular Disorders").
	polypeptides of the invention	
	(including antibodies and	
	agonists or antagonists of the	
	invention) to regulate NFAT	lupus erythematosis, multiple
	transcription factors and	sclerosis and/or as described
	modulate expression of genes	_
-	involved in	immunodeficiencies (e.g., as
	immunomodulatory functions.	s.   described below). Preferred
	Exemplary assays for	indications include neoplastic
	transcription through the	diseases (e.g., leukemia,
	NFAT response element that	
	may be used or routinely	prostate, breast, lung, colon,
	modified to test NFAT-	pancreatic, esophageal,
	response element activity of	stomach, brain, liver, and
	polypeptides of the invention	urinary tract cancers and/or as
	(including antibodies and	described below under
	agonists or antagonists of the	
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	m as, for example, hyperplasia,
	et al., Proc Natl Acad Sci USA	A metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	er   Preferred indications include
	et al., Int J Biochem Cell Biol	l anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	i leukopenia, thrombocytopenia,
	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia
	Hutchinson and McCloskey, J	J (ALL), plasmacytomas,
	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's

				16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
				al J Exp Med 188:527-537	granulomatous disease.
				(1998), the contents of each of	inflammatory bowel disease,
_				which are herein incorporated	sepsis, neutropenia,
				by reference in its entirety.	neutrophilia, psoriasis,
				Mast cells that may be used	suppression of immune
				according to these assays are	reactions to transplanted
				publicly available (e.g.,	organs and tissues, hemophilia,
				through the ATCC).	hypercoagulation, diabetes
				Exemplary human mast cells	mellitus, endocarditis,
				that may be used according to	meningitis, and Lyme Disease.
				these assays include the HMC-	
				1 cell line, which is an	
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HPRBC80	1408	Activation of	Assays for the activation of	Highly preferred indications
460			transcription	transcription through the	include blood disorders (e.g.,
			through NFAT	Nuclear Factor of Activated T	as described below under
			response element in	cells (NFAT) response element	"Immune Activity", "Blood-
			immune cells (such	are well-known in the art and	Related Disorders", and/or
			as natural killer	may be used or routinely	"Cardiovascular Disorders").
			cells).	modified to assess the ability	Highly preferred indications
				of polypeptides of the	include autoimmune diseases
				invention (including antibodies	(e.g., rheumatoid arthritis,
				and agonists or antagonists of	systemic lupus erythematosis,
				the invention) to regulate	multiple sclerosis and/or as
				NFAT transcription factors and	described below),

modulate expression of genes	immunodeficiencies (e.g., as
involved in	described below), boosting a T
immunomodulatory functions.	cell-mediated immune
Exemplary assays for	response, and suppressing a T
transcription through the	cell-mediated immune
NFAT response element that	response. Additional highly
may be used or routinely	preferred indications include
modified to test NFAT-	inflammation and
response element activity of	inflammatory disorders. An
polypeptides of the invention	additional highly preferred
(including antibodies and	indication is infection (e.g., an
agonists or antagonists of the	infectious disease as described
invention) include assays	below under "Infectious
disclosed in Berger et al., Gene	Disease"). Preferred
66:1-10 (1998); Cullen and	indications include neoplastic
Malm, Methods in Enzymol	diseases (e.g., leukemia,
216:362-368 (1992); Henthorn	lymphoma, and/or as described
et al., Proc Natl Acad Sci USA	below under
85:6342-6346 (1988);	"Hyperproliferative
Aramburu et al., J Exp Med	Disorders"). Preferred
182(3):801-810 (1995); De	indications include neoplasms
Boer et al., Int J Biochem Cell	and cancers, such as, for
Biol 31(10):1221-1236 (1999);	example, leukemia, lymphoma,
Fraser et al., Eur J Immunol	and prostate, breast, lung,
29(3):838-844 (1999); and	colon, pancreatic, esophageal,
Yeseen et al., J Biol Chem	stomach, brain, liver and
268(19):14285-14293 (1993),	urinary cancer. Other preferred
the contents of each of which	indications include benign
are herein incorporated by	dysproliferative disorders and
reference in its entirety. NK	pre-neoplastic conditions, such
cells that may be used	as, for example, hyperplasia,

				according to these assays are	metaplasia, and/or dysplasia.
				publicly available (e.g.,	Preferred indications also
				through the ATCC).	include anemia, pancytopenia,
				Exemplary human NK cells	leukopenia, thrombocytopenia,
				that may be used according to	Hodgkin's disease, acute
				these assays include the NK-	lymphocytic anemia (ALL),
				YT cell line, which is a human	plasmacytomas, multiple
				natural killer cell line with	myeloma, Burkitt's lymphoma,
				cytolytic and cytotoxic	arthritis, AIDS, granulomatous
				activity.	disease, inflammatory bowel
					disease, sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
-					hemophilia, hypercoagulation,
			•		diabetes mellitus, endocarditis,
-					meningitis, Lyme Disease,
					asthma and allergy.
	HPRBC80	1408	Activation of	Assays for the activation of	A preferred embodiment of
460			transcription	transcription through the	the invention includes a
			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha
			immune cells (such	art and may be used or	production. An alternative
-			as natural killer	routinely modified to assess	highly preferred embodiment
			cells).	the ability of polypeptides of	of the invention includes a
				the invention (including	method for stimulating (e.g.,
				antibodies and agonists or	increasing) TNF alpha
				antagonists of the invention) to	production. Preferred
	-i.			regulate serum response	indications include blood
				factors and modulate the	disorders (e.g., as described

Constanting of motions for the formation of the constanting of the con	in growth and upregulate the Activity", "Blood-Related	 	Exemplary assays for Highly preferred indications	transcription through the SRE   include autoimmune diseases	that may be used or routinely (e.g., rheumatoid arthritis,	 of the polypeptides of the Crohn's disease, multiple	invention (including antibodies   sclerosis and/or as described	and agonists or antagonists of   below), immunodeficiencies	the invention) include assays (e.g., as described below),	disclosed in Berger et al., Gene   boosting a T cell-mediated	   Malm, Methods in Enzymol   suppressing a T cell-mediated	216:362-368 (1992); Henthorn   immune response. Additional	et al., Proc Natl Acad Sci USA   highly preferred indications	85:6342-6346 (1988); Benson include inflammation and	et al., J Immunol 153(9):3862- inflammatory disorders, and	3873 (1994); and Black et al., treating joint damage in	Virus Genes 12(2):105-117 patients with rheumatoid	(1997), the content of each of arthritis. An additional highly	which are herein incorporated   preferred indication is sepsis.	by reference in its entirety. T   Highly preferred indications	cells that may be used include neoplastic diseases	according to these assays are (e.g., leukemia, lymphoma,	publicly available (e.g., and/or as described below	through the ATCC).	Exemplary T cells that may be   Disorders"). Additionally,	
																										_

	which is a human natural killer	cancers, such as, for example,
	cell line with cytolytic and	leukemia, lymphoma,
	cytotoxic activity.	melanoma plioma (e.g.
tumors, and prostate, breast, huma, colon, pancreatic, esophagea, stomach, brain, liver and urinary career. Oth preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplastia, metaplastia, and/or dysplastia, metaplastia, and/or dysplastia, pancytopenia, pancytopenia, thrombocytoenia, thrombocytoenia, thrombocytoenia, thrombocytoenia, thrombocytoenia, thrombocytoenia, thrombocytoenia, thrombocytoenia, disease, acute hyperpositia, and/or dysplastia, and/or dysplastia, and/or dysplastia, and/or dysplastia, and/or dysplastia, elektopenia, thrombocytoenia, thrombocytoenia, charactions, charactions to transplanted organs and tissues, femorphii, procreasiis, suppression of immune reactions to transplanted organs and tissues, femorphii, hypercoagulation, diabetes mellitius, endocarditis, meningitis, Lyme Disease.		malignant glioma), solid
lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Oth preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia Preferred indications include anemia, pancylopenia, leukopenia, thrombocytoen Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkit's lymphor arthritis, AIDS, granulomatod disease, inflammatory bowel disease, inflammatory boy disease, inflammatory boy precognialitio, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		tumors, and prostate, breast,
seophageal, stomach, brain, liver and urinary cancer. Oth preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia, metaplasia, and/or dysplasia, preferred indications include anemia, pancytopenia, leukopenia, thrombocytopeni, lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AlDS, granulomato disease, inflammatory bowel disease, inflammatory disease, inflammatory disease, inflammatory boycoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, mellitus, endocarditis, meningitis, Lyme Disease,		lung, colon, pancreatic,
piver and urinary cancer. Oth preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia, Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopen Hodgkin's disease, acute lymphocytic aemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AlDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, inflammatory bowel disease, inflammatory bowel creactions to transplanted organs and tissues, henophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		esophageal, stomach, brain,
preferred indications include benign dysproliferative disorders and per-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia, leukopenia, thrombocytopenia, leukopenia, thrombocytopenia, nyeloma, Burkit's Jymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		liver and urinary cancer. Other
benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, andor dysplasia Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopeni Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkit's lymphor arthritis, AIDS, granulomatory bowel disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		preferred indications include
disorders and pre-neoplastic conditions, such as, for example, hyperplastia, metaplastia, and/or dysplastia preferred indications include anemia, pancytopenia, leukopenia, thrombocytopen Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkit's lymphor arthritis. AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, intropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, endocarditis, mellitus, endocarditis, mellitus, endocarditis, mellitus, cubocarditis, meningitis, Lyme Disease,		benign dysproliferative
conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia, Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopeni Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, inflammatory bowel disease, interopenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		disorders and pre-neoplastic
example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include anemia, paneytopenia, leukopenia, thrombocytopenia, thrombocytopenia, thrombocytopenia, thrombocytopenia, thrombocytopenia, thrombocytopenia, thrombocytopenia, plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, inflammatory bowel disease, inflammatory bowel disease, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilis, endocarditis, meningitis, Lyme Disease, meningitis, Lyme Disease,		conditions, such as, for
metaplasia, and/or dysplasia Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkit's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel increase, neutropenia, neutrophila, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		example, hyperplasia,
Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopen Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		metaplasia, and/or dysplasia.
anemia, pancytopenia, leukopenia, thrombocytopen Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		Preferred indications include
leukopenia, thrombocytopen Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkit's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		anemia, pancytopenia,
Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkit's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		leukopenia, thrombocytopenia,
lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		Hodgkin's disease, acute
plasmacytomas, multiple myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		lymphocytic anemia (ALL),
myeloma, Burkitt's lymphor arthritis, AIDS, granulomato disease, inflammatory bowel disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophili hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		plasmacytomas, multiple
arthritis, AIDS, granulomato disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		myeloma, Burkitt's lymphoma,
disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		arthritis, AIDS, granulomatous
disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		disease, inflammatory bowel
neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophil hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		disease, neutropenia,
suppression of immune reactions to transplanted organs and tissues, hemophii hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		neutrophilia, psoriasis,
reactions to transplanted organs and tissues, hemophii hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		suppression of immune
organs and tissues, hemophii hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		reactions to transplanted
hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease,		organs and tissues, hemophilia,
mellitus, endocarditis, meningitis, Lyme Disease,		hypercoagulation, diabetes
meningitis, Lyme Disease,		mellitus, endocarditis,
		meningitis, Lyme Disease,

					cardiac reperfusion injury, and
5 <del></del>					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HPRBC80	1408	Activation of	Assays for the activation of	Preferred indications
460			transcription	transcription through the AP1	include neoplastic diseases
			through AP1	response element are well-	(e.g., as described below under
			response element in	known in the art and may be	"Hyperproliferative
			immune cells (such	used or routinely modified to	Disorders"), blood disorders
			as T-cells).	assess the ability of	(e.g., as described below under
				polypeptides of the invention	"Immune Activity",
				(including antibodies and	"Cardiovascular Disorders",
				agonists or antagonists of the	and/or "Blood-Related
				invention) to modulate growth	Disorders"), and infection
				and other cell functions.	(e.g., an infectious disease as
				Exemplary assays for	described below under
				transcription through the AP1	"Infectious Disease"). Highly
				response element that may be	preferred indications include
				used or routinely modified to	autoimmune diseases (e.g.,
				test AP1-response element	rheumatoid arthritis, systemic
				activity of polypeptides of the	lupus erythematosis, multiple
				invention (including antibodies	sclerosis and/or as described
				and agonists or antagonists of	below) and
				the invention) include assays	immunodeficiencies (e.g., as
				disclosed in Berger et al., Gene	described below). Additional
				66:1-10 (1988); Cullen and	highly preferred indications
				Malm, Methods in Enzymol	include inflammation and
				216:362-368 (1992); Henthorn	inflammatory disorders.
				et al., Proc Natl Acad Sci USA	Highly preferred indications

\$8	85:6342-6346 (1988):	also include neoplastic
Re	Rellahan et al J Biol Chem	diseases (e.g., leukemia,
27.2	272(49):30806-30811 (1997);	lymphoma, and/or as described
Ch	Chang et al., Mol Cell Biol	below under
18	18(9):4986-4993 (1998); and	"Hyperproliferative
F172	Fraser et al., Eur J Immunol	Disorders"). Highly preferred
290	29(3):838-844 (1999), the	indications include neoplasms
100	contents of each of which are	and cancers, such as, leukemia,
her	herein incorporated by	lymphoma, prostate, breast,
ref	reference in its entirety.	lung, colon, pancreatic,
nH Ho	Human T cells that may be	esophageal, stomach, brain,
9SIN	used according to these assays	liver, and urinary cancer. Other
are	are publicly available (e.g.,	preferred indications include
thr	through the ATCC).	benign dysproliferative
Ex	Exemplary human T cells that	disorders and pre-neoplastic
ma	may be used according to these	conditions, such as, for
ass	assays include the SUPT cell	example, hyperplasia,
lin	line, which is an IL-2 and IL-4	metaplasia, and/or dysplasia.
sea	responsive suspension-culture	Preferred indications include
lao	cell line.	arthritis, asthma, AIDS,
		allergy, anemia, pancytopenia,
		leukopenia, thrombocytopenia,
		Hodgkin's disease, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		granulomatous disease,
		inflammatory bowel disease,
		sepsis, psoriasis, suppression of
		immune reactions to
		transplanted organs and

					tissues, endocarditis,
					meningitis, and Lyme Disease.
	HPRBC80	1408	Activation of	Assays for the activation of	Highly preferred indications
460			transcription	transcription through the	include blood disorders (e.g.,
			through NFAT	Nuclear Factor of Activated T	as described below under
			response element in	cells (NFAT) response element	"Immune Activity", "Blood-
			immune cells (such	are well-known in the art and	Related Disorders", and/or
			as T-cells).	may be used or routinely	"Cardiovascular Disorders").
				modified to assess the ability	Highly preferred indications
				of polypeptides of the	include autoimmune diseases
				invention (including antibodies	(e.g., rheumatoid arthritis,
				and agonists or antagonists of	systemic lupus erythematosis,
				the invention) to regulate	multiple sclerosis and/or as
	_			NFAT transcription factors and	described below),
				modulate expression of genes	immunodeficiencies (e.g., as
				involved in	described below), boosting a T
				immunomodulatory functions.	cell-mediated immune
				Exemplary assays for	response, and suppressing a T
				transcription through the	cell-mediated immune
				NFAT response element that	response. Additional highly
				may be used or routinely	preferred indications include
				modified to test NFAT-	inflammation and
				response element activity of	inflammatory disorders. An
				polypeptides of the invention	additional highly preferred
				(including antibodies and	indication is infection (e.g., an
				agonists or antagonists of the	infectious disease as described
				invention) include assays	below under "Infectious
				disclosed in Berger et al., Gene	Disease"). Preferred
				66:1-10 (1998); Cullen and	indications include neoplastic
				Malm, Methods in Enzymol	diseases (e.g., leukemia,
				216:362-368 (1992); Henthorn	lymphoma, and/or as described

	et al., Proc Natl Acad Sci USA	below under
	85:6342-6346 (1988): Serfling	"Hynemproliferative
	et al., Biochim Biophys Acta	Disorders"). Preferred
	1498(1):1-18 (2000); De Boer	indications include neoplasms
	et al., Int J Biochem Cell Biol	and cancers, such as, for
	31(10):1221-1236 (1999);	example, leukemia, lymphoma,
	 Fraser et al., Eur J Immunol	and prostate, breast, lung,
	29(3):838-844 (1999); and	colon, pancreatic, esophageal,
	Yeseen et al., J Biol Chem	stomach, brain, liver and
	268(19):14285-14293 (1993),	urinary cancer. Other preferred
	the contents of each of which	indications include benign
	are herein incorporated by	dysproliferative disorders and
	reference in its entirety. T	pre-neoplastic conditions, such
	cells that may be used	as, for example, hyperplasia,
	according to these assays are	metaplasia, and/or dysplasia.
	publicly available (e.g.,	Preferred indications also
	through the ATCC).	include anemia, pancytopenia,
	Exemplary human T cells that	leukopenia, thrombocytopenia,
	 may be used according to these	Hodgkin's disease, acute
	assays include the SUPT cell	lymphocytic anemia (ALL),
	line, which is a suspension	plasmacytomas, multiple
	culture of IL-2 and IL-4	myeloma, Burkitt's lymphoma,
	responsive T cells.	arthritis, AIDS, granulomatous
		disease, inflammatory bowel
		disease, sepsis, neutropenia,
		neutrophilia, psoriasis,
		suppression of immune
		reactions to transplanted
		organs and tissues,
		hemophilia, hypercoagulation,
		diabetes mellitus, endocarditis,

					meningitis, Lyme Disease,
					asthma and allergy.
	HPRBC80	1408	Activation of	Assays for the activation of	Highly preferred indications
460			transcription	transcription through the	include inflammation and
			through NFKB	NFKB response element are	inflammatory disorders.
-1.			response element in	well-known in the art and may	Highly preferred indications
			immune cells (such	be used or routinely modified	include blood disorders (e.g.,
			as T-cells).	to assess the ability of	as described below under
				polypeptides of the invention	"Immune Activity", "Blood-
				(including antibodies and	Related Disorders", and/or
				agonists or antagonists of the	"Cardiovascular Disorders").
				invention) to regulate NFKB	Highly preferred indications
				transcription factors and	include autoimmune diseases
				modulate expression of	(e.g., rheumatoid arthritis,
				immunomodulatory genes.	systemic lupus erythematosis,
				Exemplary assays for	multiple sclerosis and/or as
				transcription through the	described below), and
				NFKB response element that	immunodeficiencies (e.g., as
				may be used or rountinely	described below). An
				modified to test NFKB-	additional highly preferred
				response element activity of	indication is infection (e.g.,
				polypeptides of the invention	AIDS, and/or an infectious
				(including antibodies and	disease as described below
				agonists or antagonists of the	under "Infectious Disease").
				invention) include assays	Highly preferred indications
				disclosed in Berger et al., Gene	include neoplastic diseases
				66:1-10 (1998); Cullen and	(e.g., melanoma, leukemia,
				Malm, Methods in Enzymol	lymphoma, and/or as described
				216:362-368 (1992); Henthorn	below under
				et al., Proc Natl Acad Sci USA	"Hyperproliferative
				85:6342-6346 (1988); Black et	Disorders"). Highly preferred

al., Virus Gnes 15(2):105-117	indications include neoplasms
(1997); and Fraser et al	and cancers, such
29(3):838-844 (1999), the	as,melanoma, renal cell
contents of each of which are	carcinoma, leukemia,
herein incorporated by	lymphoma, and prostate,
reference in its entirety. T	breast, lung, colon, pancreatic,
cells that may be used	esophageal, stomach, brain,
according to these assays are	liver and urinary cancer. Other
publicly available (e.g.,	preferred indications include
through the ATCC).	benign dysproliferative
Exemplary human T cells that	disorders and pre-neoplastic
may be used according to these	conditions, such as, for
assays include the SUPT cell	example, hyperplasia,
line, which is a suspension	metaplasia, and/or dysplasia.
culture of IL-2 and IL-4	Preferred indications also
responsive T cells.	include anemia, pancytopenia,
	leukopenia, thrombocytopenia,
	Hodgkin's disease, acute
	lymphocytic anemia (ALL),
	plasmacytomas, multiple
	myeloma, Burkitt's lymphoma,
	arthritis, AIDS,
	granulomatous disease,
	inflammatory bowel disease,
	sepsis, neutropenia,
	neutrophilia, psoriasis,
	hemophilia, hypercoagulation,
	diabetes mellitus, endocarditis,
	meningitis, Lyme Disease,
-	suppression of immune
	reactions to transplanted

					organs, asthma and allergy.
	HPRBF19	1409	Activation of	Assays for the activation of	Preferred embodiments of the
461			transcription	transcription through the	invention include using
			through NFKB	NFKB response element are	polypeptides of the invention
			response element in	well-known in the art and may	(or antibodies, agonists, or
			neuronal cells (such	be used or routinely modified	antagonists thereof) in
			as SKNMC cells).	to assess the ability of	detection, diagnosis,
				polypeptides of the invention	prevention, and/or treatment of
				(including antibodies and	Neurological Diseases and
	-			agonists or antagonists of the	Disorders (e.g. Alzheimer"s
				invention) to regulate NFKB	Disease, Parkinson"s Disease,
				transcription factors and	Brain Cancer, Seizures).
				modulate expression of	
				neuronal genes. Exemplary	
				assays for transcription	
				through the NFKB response	
			~	element that may be used or	
				routinely modified to test	
				NFKB-response element	
				activity of polypeptides of the	
				invention (including antibodies	
				and agonists or antagonists of	
				the invention) include assays	
				disclosed in: Gill JS, et al.,	
				Neurobiol Dis, 7(4):448-461	
				(2000); Tamatani M, et al., J	
				Biol Chem, 274(13):8531-	
				8538 (1999); Berger et al.,	
				Gene 66:1-10 (1998); Cullen	
				and Malm, Methods in	
				Enzymol 216:362-368 (1992);	

	A highly preferred embodiment of the invention includes a method for stimulating endothelial cell growth. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell growth. A highly preferred embodiment of the invention includes a method for stimulating endothelial cell stimulating endothelial cell
Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); Valle Blazquez et al, Immunology 90(3):455-460 (1997); Aramburau et al., J Exp Med 82(3):801-810 (1995); and Fraser et al., 29(3):838-844 (1999), the contents of each of which are herein incorporated by reference in its entirety. Neuronal cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary neuronal cells that may be used according to these assays include the SKNMC neuronal cell line.	Caspase Apoptosis. Assays for caspase apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote caspase protease-mediated apoptosis. Induction of apoptosis in endothelial cells supporting the
	Endothelial Cell Apoptosis
	1410
	HPTTG19
	462

vasculature of tumors is	proliferation. An alternative
associated with tumor	highly preferred embodiment
regression due to loss of tumor	of the invention includes a
blood supply. Exemplary	method for inhibiting
 assays for caspase apoptosis	endothelial cell proliferation.
that may be used or routinely	A highly preferred
modified to test capase	embodiment of the invention
apoptosis activity of	includes a method for
polypeptides of the invention	stimulating apoptosis of
(including antibodies and	endothelial cells. An
agonists or antagonists of the	alternative highly preferred
invention) include the assays	embodiment of the invention
disclosed in Lee et al., FEBS	includes a method for
Lett 485(2-3): 122-126 (2000);	inhibiting (e.g., decreasing)
Nor et al., J Vasc Res 37(3):	apoptosis of endothelial cells.
209-218 (2000); and Karsan	A highly preferred
and Harlan, J Atheroscler	embodiment of the invention
Thromb 3(2): 75-80 (1996);	includes a method for
the contents of each of which	stimulating angiogenisis. An
are herein incorporated by	alternative highly preferred
reference in its entirety.	embodiment of the invention
Endothelial cells that may be	includes a method for
used according to these assays	inhibiting angiogenesis. A
are publicly available (e.g.,	highly preferred embodiment
through commercial sources).	of the invention includes a
Exemplary endothelial cells	method for reducing cardiac
that may be used according to	hypertrophy. An alternative
these assays include bovine	highly preferred embodiment
aortic endothelial cells	of the invention includes a
(bAEC), which are an example	method for inducing cardiac
of endothelial cells which line	hypertrophy. Highly

	[q .	blood vessels and are involved	preferred indications include
	ın	in functions that include, but are not limited to,	neoplastic diseases (e.g., as described below under
	an	angiogenesis, vascular	"Hyperproliferative
	be	permeability, vascular tone,	Disorders"), and disorders of
	an	and immune cell extravasation.	the cardiovascular system
			(e.g., heart disease, congestive
			heart failure, hypertension,
			aortic stenosis,
			cardiomyopathy, valvular
			regurgitation, left ventricular
			dysfunction, atherosclerosis
			and atherosclerotic vascular
			disease, diabetic nephropathy,
-			intracardiac shunt, cardiac
			hypertrophy, myocardial
			infarction, chronic
	-		hemodynamic overload, and/or
			as described below under
			"Cardiovascular Disorders").
			Highly preferred indications
			include cardiovascular,
			endothelial and/or angiogenic
			disorders (e.g., systemic
-			disorders that affect vessels
			such as diabetes mellitus, as
			well as diseases of the vessels
			themselves, such as of the
			arteries, capillaries, veins
			and/or lymphatics). Highly
			preferred are indications that

	stimulate angiogenesis and/or
	cardiovascularization. Highly
	preferred are indications that
	inhibit angiogenesis and/or
	cardiovascularization.
	Highly preferred indications
	include antiangiogenic activity
	to treat solid tumors,
	leukemias, and Kaposi"s
 	sarcoma, and retinal disorders.
	Highly preferred indications
	include neoplasms and cancer,
	such as, Kaposi"s sarcoma,
	hemangioma (capillary and
	cavernous), glomus tumors,
	telangiectasia, bacillary
	angiomatosis,
	hemangioendothelioma,
	angiosarcoma,
	haemangiopericytoma,
 	Iymphangioma,
	lymphangiosarcoma. Highly
	preferred indications also
	include cancers such as,
	prostate, breast, lung, colon,
	pancreatic, esophageal,
	stomach, brain, liver, and
	urinary cancer. Preferred
	indications include benign
	dysproliferative disorders and
	pre-neoplastic conditions, such

as, for example, hyperplasia,	lasia,
metaplasia, and/or dysplasia.	lasia.
Highly preferred indications	tions
also include arterial disease,	ease,
such as, atherosclerosis,	
hypertension, coronary artery	artery
disease, inflammatory	
vasculitides, Reynaud"s	
disease and Reynaud"s	
phenomenom, aneurysms,	ns,
 restenosis; venous and	
lymphatic disorders such as	h as
thrombophlebitis,	
lymphangitis, and	
lymphedema; and other	
vascular disorders such as	as
peripheral vascular disease,	ase,
and cancer. Highly	
preferred indications also	08
include trauma such as	
wounds, burns, and injured	ıred
tissue (e.g., vascular injury	ury
such as, injury resulting from	from
balloon angioplasty, and	-C3
atheroschlerotic lesions),	
 implant fixation, scarring,	ĝ,
ischemia reperfusion injury,	jury,
rheumatoid arthritis,	
cerebrovascular disease, renal	, renal
diseases such as acute renal	enal
failure, and osteoporosis.	S.

Additional highly preferred	indications include stroke,	graft rejection, diabetic or	other retinopathies, thrombotic	and coagulative disorders,	vascularitis, lymph	angiogenesis, sexual disorders,	age-related macular	degeneration, and treatment	/prevention of endometriosis	and related conditions.	Additional highly preferred	indications include fibromas,	heart disease, cardiac arrest,	heart valve disease, and	vascular disease.	Preferred indications include	blood disorders (e.g., as	described below under	"Immune Activity", "Blood-	Related Disorders", and/or	"Cardiovascular Disorders").	Preferred indications include	autoimmune diseases (e.g.,	rheumatoid arthritis, systemic	lupus erythematosis, multiple	sclerosis and/or as described	below) and	immunodeficiencies (e.g., as	
																													_

					inflammation and
					inflammatory disorders (such
		-			as acute and chronic
					inflammatory diseases, e.g.,
					inflammatory bowel disease
					and Crohn's disease), and pain
					management.
463	HPTVX32	1411	SEAP in BEAS/NFkB		
	HPTVX32	1411	Activation of	This reporter assay measures	Highly preferred indications
463			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the GATA3 response	Preferred indications also
				element are well-known in the	include blood disorders (e.g.,
				art and may be used or	as described below under
				routinely modified to assess	"Immune Activity", "Blood-
				the ability of polypeptides of	Related Disorders", and/or
				the invention (including	"Cardiovascular Disorders").
				antibodies and agonists or	Preferred indications include
				antagonists of the invention) to	autoimmune diseases (e.g.,
				regulate GATA3 transcription	rheumatoid arthritis, systemic
				factors and modulate	lupus erythematosis, multiple
				expression of mast cell genes	sclerosis and/or as described
				important for immune response	below) and
				development. Exemplary	immunodeficiencies (e.g., as

assays f	assays for transcription	described below). Preferred
through	through the GATA3 response	indications include neoplastic
element	element that may be used or	diseases (e.g., leukemia,
routinel	routinely modified to test	lymphoma, melanoma,
GATA3	GATA3-response element	prostate, breast, lung, colon,
activity	activity of polypeptides of the	pancreatic, esophageal,
inventio	invention (including antibodies	stomach, brain, liver, and
and ago	and agonists or antagonists of	urinary tract cancers and/or as
the inve	the invention) include assays	described below under
disclose	disclosed in Berger et al., Gene	"Hyperproliferative
66:1-10	66:1-10 (1998); Cullen and	Disorders"). Other preferred
Malm, I	Malm, Methods in Enzymol	indications include benign
216:362	216:362-368 (1992); Henthorn	dysproliferative disorders and
et al., P.	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
85:6342	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
et al., C	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
Quant B	Quant Biol 64:563-571 (1999);	Preferred indications include
Rodrigu	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
l Immul	Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
(1999);	(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
Cell 89(		acute lymphocytic anemia
Henders	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
14(6):47	14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
contents	contents of each of which are	lymphoma, arthritis, AIDS,
herein	herein incorporated by	granulomatous disease,
reference	reference in its entirety. Mast	inflammatory bowel disease,
cells the	cells that may be used	sepsis, neutropenia,
accordii	according to these assays are	neutrophilia, psoriasis,
publicly	publicly available (e.g.,	suppression of immune
through	through the ATCC).	reactions to transplanted
Exempl	Exemplary human mast cells	organs and tissues, hemophilia,

				that may be used according to these assays include the HMC-	hypercoagulation, diabetes mellitus endocarditis
				1 cell line, which is an	meningitis, and Lyme Disease.
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
463	HPTVX32	1411	Hexosaminidase in RBL-2H3		
	HPVAB94	1412	Activation of	Assays for the activation of	Highly preferred indications
464			transcription	transcription through the	include blood disorders (e.g.,
			through NFAT	Nuclear Factor of Activated T	as described below under
			response element in	cells (NFAT) response element	"Immune Activity", "Blood-
			immune cells (such	are well-known in the art and	Related Disorders", and/or
			as T-cells).	may be used or routinely	"Cardiovascular Disorders").
				modified to assess the ability	Highly preferred indications
				of polypeptides of the	include autoimmune diseases
				invention (including antibodies	(e.g., rheumatoid arthritis,
				and agonists or antagonists of	systemic lupus erythematosis,
				the invention) to regulate	multiple sclerosis and/or as
				NFAT transcription factors and	described below),
				modulate expression of genes	immunodeficiencies (e.g., as
				involved in	described below), boosting a T
				immunomodulatory functions.	cell-mediated immune
				Exemplary assays for	response, and suppressing a T
				transcription through the	cell-mediated immune
-				NFAT response element that	response. Additional highly
				may be used or routinely	preferred indications include
				modified to test NFAT-	inflammation and

		response element activity of	inflammatory disorders. An
		polypeptides of the invention	additional highly preferred
		(including antibodies and	indication is infection (e.g., an
		agonists or antagonists of the	infectious disease as described
		invention) include assays	below under "Infectious
		disclosed in Berger et al., Gene	Disease"). Preferred
		66:1-10 (1998); Cullen and	indications include neoplastic
		Malm, Methods in Enzymol	diseases (e.g., leukemia,
-		216:362-368 (1992); Henthorn	lymphoma, and/or as described
		et al., Proc Natl Acad Sci USA	below under
		85:6342-6346 (1988); Serfling	"Hyperproliferative
		et al., Biochim Biophys Acta	Disorders"). Preferred
		1498(1):1-18 (2000); De Boer	indications include neoplasms
		et al., Int J Biochem Cell Biol	and cancers, such as, for
		31(10):1221-1236 (1999);	example, leukemia, lymphoma,
		Fraser et al., Eur J Immunol	and prostate, breast, lung,
		29(3):838-844 (1999); and	colon, pancreatic, esophageal,
		Yeseen et al., J Biol Chem	stomach, brain, liver and
		268(19):14285-14293 (1993),	urinary cancer. Other preferred
		the contents of each of which	indications include benign
		are herein incorporated by	dysproliferative disorders and
		reference in its entirety. T	pre-neoplastic conditions, such
		cells that may be used	as, for example, hyperplasia,
		according to these assays are	metaplasia, and/or dysplasia.
		publicly available (e.g.,	Preferred indications also
-		through the ATCC).	include anemia, pancytopenia,
		Exemplary human T cells that	leukopenia, thrombocytopenia,
		may be used according to these	Hodgkin's disease, acute
		assays include the SUPT cell	lymphocytic anemia (ALL),
		line, which is a suspension	plasmacytomas, multiple
		culture of IL-2 and IL-4	myeloma, Burkitt's lymphoma,

				responsive T cells.	arthritis, AIDS, granulomatous
					disease, sepsis, neutropenia,
					neutrophilia, psoriasis,
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease, asthma and allergy.
	HPWAY46	1413	SEAP in 293/ISRE		10
465					
	HPWAY46	1413	SEAP in HIB/CRE		
465					
	HPWAY46	1413	Activation of	This reporter assay measures	Highly preferred indications
465			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
n			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the GATA3 response	Preferred indications also
				element are well-known in the	include blood disorders (e.g.,
				art and may be used or	as described below under
				routinely modified to assess	"Immune Activity", "Blood-
				the ability of polypeptides of	Related Disorders", and/or
				the invention (including	"Cardiovascular Disorders").
				antibodies and agonists or	Preferred indications include

an	antagonists of the invention) to	autoimmune diseases (e.g.,
re	regulate GATA3 transcription	rheumatoid arthritis, systemic
fa	factors and modulate	lupus erythematosis, multiple
ex	expression of mast cell genes	sclerosis and/or as described
ni	important for immune response	below) and
ap de	development. Exemplary	immunodeficiencies (e.g., as
as	assays for transcription	described below). Preferred
th	through the GATA3 response	indications include neoplastic
el	element that may be used or	diseases (e.g., leukemia,
OI	routinely modified to test	lymphoma, melanoma,
Ö	GATA3-response element	prostate, breast, lung, colon,
ac	activity of polypeptides of the	pancreatic, esophageal,
ui	invention (including antibodies	stomach, brain, liver, and
an	and agonists or antagonists of	urinary tract cancers and/or as
th	the invention) include assays	described below under
- di	disclosed in Berger et al., Gene	"Hyperproliferative
99	66:1-10 (1998); Cullen and	Disorders"). Other preferred
W	Malm, Methods in Enzymol	indications include benign
21	216:362-368 (1992); Henthorn	dysproliferative disorders and
et	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
88	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
et	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
	Quant Biol 64:563-571 (1999);	Preferred indications include
R	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
	J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
(1)	(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
		acute lymphocytic anemia
H	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
14		multiple myeloma, Burkitt's
03	contents of each of which are	lymphoma, arthritis, AIDS,
he	herein incorporated by	granulomatous disease,

as are  rding to refling to				reference in its entirety. Mast	inflammatory bowel disease,
publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT signaling pathway in HMC-1 response element in immune cells (such as mast cells).  Activated T cells (nr Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				cells that may be used according to these assays are	sepsis, neutropenia, neutronhilia psoriasis
through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC- I cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in human mast cell line. immune cells (such activation of NFAT in mast cells).  Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				publicly available (e.g.,	suppression of immune
Exemplary human mast cells that may be used according to these assays include the HMC-  I cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in human mast cell line.  immune cells (such Activation of NFAT in mast cells).  Cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				through the ATCC).	reactions to transplanted
that may be used according to these assays include the HMC-  1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  1413 Activation of This reporter assay measures transcription activation of the NFAT signaling pathway in HMC-1 response element in human mast cell line. immune cells (such activation of NFAT in mast as mast cells).  Cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				Exemplary human mast cells	organs and tissues, hemophilia,
these assays include the HMC-  1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in immune cells (such cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well- known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				that may be used according to	hypercoagulation, diabetes
immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT isignaling pathway in HMC-1 response element in human mast cell line. immune cells (such as mast cells).  Activation of transcription cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				these assays include the HMC-	mellitus, endocarditis,
immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in human mast cell line. immune cells (such as mast cells). Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well- known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				1 cell line, which is an	meningitis, and Lyme Disease.
established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in human mast cell line. Activation of NFAT in mast as mast cells).  Cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				immature human mast cell line	
blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in human mast cell line. immune cells (such as mast cells).  Cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				established from the peripheral	
cell leukemia, and exhibits many characteristics of immature mast cells.  Activation of through NFAT response element in immune cells (such as mast cells).  Cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well- known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				blood of a patient with mast	
many characteristics of immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT signaling pathway in HMC-1 response element in human mast cell line. immune cells (such as mast cells).  Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				cell leukemia, and exhibits	
immature mast cells.  Activation of This reporter assay measures transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in immune cells (such as mast cells).  Cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				many characteristics of	
transcription activation of the NFAT through NFAT signaling pathway in HMC-1 response element in immune cells (such as mast cells).  cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention				immature mast cells.	
activation of the NFAT signaling pathway in HMC-1 human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention	HPWAY46	1413	Activation of	This reporter assay measures	Highly preferred indications
signaling pathway in HMC-1 human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention			transcription	activation of the NFAT	include allergy, asthma, and
human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention			response element in	human mast cell line.	indications include infection
cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the Nuclear Factor of	Preferred indications also
				Activated T cells (NFAT)	include blood disorders (e.g.,
				response element are well-	as described below under
				known in the art and may be	"Immune Activity", "Blood-
				used or routinely modified to	Related Disorders", and/or
				assess the ability of	"Cardiovascular Disorders").
				polypeptides of the invention	Preferred indications include

(including antibodies and	autoimmune diseases (e.g.,
agonists or antagonists of the	rheumatoid arthritis, systemic
invention) to regulate NFAT	lupus erythematosis, multiple
transcription factors and	sclerosis and/or as described
 modulate expression of genes	below) and
involved in	immunodeficiencies (e.g., as
immunomodulatory functions.	described below). Preferred
Exemplary assays for	indications include neoplastic
transcription through the	diseases (e.g., leukemia,
NFAT response element that	lymphoma, melanoma,
may be used or routinely	prostate, breast, lung, colon,
modified to test NFAT-	pancreatic, esophageal,
response element activity of	stomach, brain, liver, and
polypeptides of the invention	urinary tract cancers and/or as
(including antibodies and	described below under
agonists or antagonists of the	"Hyperproliferative
 invention) include assays	Disorders"). Other preferred
disclosed in Berger et al., Gene	indications include benign
 66:1-10 (1998); Cullen and	dysproliferative disorders and
Malm, Methods in Enzymol	pre-neoplastic conditions, such
216:362-368 (1992); Henthorn	as, for example, hyperplasia,
et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
85:6342-6346 (1988); De Boer	Preferred indications include
et al., Int J Biochem Cell Biol	anemia, pancytopenia,
31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
et al., J Immunol	leukemias, Hodgkin's disease,
165(12):7215-7223 (2000);	acute lymphocytic anemia
Hutchinson and McCloskey, J	(ALL), plasmacytomas,
Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
al., J Exp Med 188:527-537	granulomatous disease,

				(1998), the contents of each of which are herein incorporated by reference in its entirety.	inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immine
				according to these assays are publicly available (e.g.,	reactions to transplanted organs and tissues, hemophilia,
				through the ATCC).  Exemplary human mast cells	hypercoagulation, diabetes mellitus, endocarditis,
				that may be used according to these assays include the HMC-1 cell line, which is an	meningitis, and Lyme Disease.
				immature human mast cell line	
				established from the peripheral	
				cell leukemia, and exhibits	
				many characteristics of	
	HPWAY46	1413	IL-6 in HUVEC	Illiniarate mast cens.	
465					
	HPWAY46	1413	Activation of	Assays for the activation of	A highly preferred
465			transcription	transcription through the CD28	embodiment of the invention
			through CD28	response element are well-	includes a method for
			response element in	known in the art and may be	stimulating T cell proliferation.
			immune cells (such	used or routinely modified to	An alternative highly preferred
			as T-cells).	assess the ability of	embodiment of the invention
				polypeptides of the invention	includes a method for
				(including antibodies and	inhibiting T cell proliferation.
				agonists or antagonists of the	A highly preferred
				invention) to stimulate IL-2	embodiment of the invention
				expression in T cells.	includes a method for
				Exemplary assays for	activating T cells. An

transcription through the CD28	alternative highly preferred
response element that may be	embodiment of the invention
used or routinely modified to	includes a method for
test CD28-response element	inhibiting the activation of
activity of polypeptides of the	and/or inactivating T cells.
invention (including antibodies	A highly preferred
and agonists or antagonists of	embodiment of the invention
the invention) include assays	includes a method for
disclosed in Berger et al., Gene	stimulating (e.g., increasing)
66:1-10 (1998); Cullen and	IL-2 production. An alternative
Malm, Methods in Enzymol	highly preferred embodiment
216:362-368 (1992); Henthorn	of the invention includes a
et al., Proc Natl Acad Sci USA	method for inhibiting (e.g.,
85:6342-6346 (1988);	reducing) IL-2 production.
McGuire and Iacobelli, J	Additional highly preferred
Immunol 159(3):1319-1327	indications include
(1997); Parra et al., J Immunol	inflammation and
166(4):2437-2443 (2001); and	inflammatory disorders.
Butscher et al., J Biol Chem	Highly preferred indications
3(1):552-560 (1998), the	include autoimmune diseases
contents of each of which are	(e.g., rheumatoid arthritis,
herein incorporated by	systemic lupus erythematosis,
reference in its entirety. T	multiple sclerosis and/or as
cells that may be used	described below),
according to these assays are	immunodeficiencies (e.g., as
publicly available (e.g.,	described below), boosting a T
through the ATCC).	cell-mediated immune
Exemplary human T cells that	response, and suppressing a T
may be used according to these	
assays include the JURKAT	response. An additional highly
cell line, which is a suspension	preferred indication includes

culture of leukemia cells that	infection (e.g., AIDS, and/or as
produce IL-2 when stimulated.	described below under
	"Infectious Disease").
	Highly preferred indications
	include neoplastic diseases
	(e.g., melanoma, renal cell
	carcinoma, leukemia,
	lymphoma, and/or as described
	below under
	"Hyperproliferative
	Disorders"). Highly preferred
	indications include neoplasms
	and cancers, such as, for
	example, melanoma (e.g.,
	metastatic melanoma), renal
	cell carcinoma (e.g., metastatic
	renal cell carcinoma),
	leukemia, lymphoma (e.g., T
-	cell lymphoma), and prostate,
	breast, lung, colon, pancreatic,
	esophageal, stomach, brain,
	liver and urinary cancer. Other
	preferred indications include
	benign dysproliferative
	disorders and pre-neoplastic
	conditions, such as, for
	example, hyperplasia,
	metaplasia, and/or dysplasia.
	A highly preferred indication
	is infection (e.g., tuberculosis,
	infections associated with

granulomatous disease, and	osteoporosis, and/or an	infectious disease as described	below under "Infectious	Disease"). A highly preferred	indication is AIDS.	Additional highly preferred	indications include suppression	of immune reactions to	transplanted organs and/or	tissues, uveitis, psoriasis, and	tropical spastic paraparesis.	Preferred indications include	blood disorders (e.g., as	described below under	"Immune Activity", "Blood-	Related Disorders", and/or	"Cardiovascular Disorders").	Preferred indications also	include anemia, pancytopenia,	leukopenia, thrombocytopenia,	Hodgkin's disease, acute	lymphocytic anemia (ALL),	plasmacytomas, multiple	myeloma, Burkitt's lymphoma,	arthritis, granulomatous	disease, inflammatory bowel	disease, sepsis, neutropenia,	neutrophilia, hemophilia,	hypercoagulation, diabetes
																									-				

					meningitis, Lyme Disease,
					asthma and allergy.
	HPWAY46	1413	SEAP in Jurkat/IL4		
465			promoter		
	HPWAY46	1413	SEAP in Jurkat/IL4		
465			promoter (antiCD3 co-stim)		
	HPWAY46	1413	Activation of	Assays for the activation of	Highly preferred indications
465			transcription	transcription through the	include neoplastic diseases
			through GAS	Gamma Interferon Activation	(e.g., leukemia, lymphoma,
			response element in	Site (GAS) response element	and/or as described below
			immune cells (such	are well-known in the art and	under "Hyperproliferative
			as T-cells).	may be used or routinely	Disorders"). Highly preferred
_,				modified to assess the ability	indications include neoplasms
				of polypeptides of the	and cancers, such as, for
				invention (including antibodies	example, leukemia, lymphoma
				and agonists or antagonists of	(e.g., T cell lymphoma,
				the invention) to regulate	Burkitt's lymphoma, non-
				STAT transcription factors and	Hodgkins lymphoma,
				modulate gene expression	Hodgkin"s disease),
				involved in a wide variety of	melanoma, and prostate,
				cell functions. Exemplary	breast, lung, colon, pancreatic,
				assays for transcription	esophageal, stomach, brain,
				through the GAS response	liver and urinary cancer. Other
				element that may be used or	preferred indications include
				routinely modified to test	benign dysproliferative
				GAS-response element activity	disorders and pre-neoplastic
				of polypeptides of the	conditions, such as, for
				invention (including antibodies	example, hyperplasia,
				and agonists or antagonists of	metaplasia, and/or dysplasia.
				the invention) include assays	Preferred indications include

disclosed in Berger et al Gene	autoimmune diseases (e.g
66:1-10 (1998); Cullen and	rheumatoid arthritis, systemic
Malm, Methods in Enzymol	lupus erythematosis, multiple
216:362-368 (1992); Henthorn	sclerosis and/or as described
et al., Proc Natl Acad Sci USA	below), immunodeficiencies
85:6342-6346 (1988);	(e.g., as described below),
Matikainen et al., Blood	boosting a T cell-mediated
93(6):1980-1991 (1999); and	immune response, and
Henttinen et al., J Immunol	suppressing a T cell-mediated
155(10):4582-4587 (1995), the	immune response. Additional
contents of each of which are	preferred indications include
herein incorporated by	inflammation and
 reference in its entirety.	inflammatory disorders.
Exemplary human T cells,	Highly preferred indications
such as the SUPT cell line, that	include blood disorders (e.g.,
may be used according to these	as described below under
assays are publicly available	"Immune Activity", "Blood-
(e.g., through the ATCC).	Related Disorders", and/or
	"Cardiovascular Disorders"),
	and infection (e.g., viral
	infections, tuberculosis,
	infections associated with
	chronic granulomatosus
	disease and malignant
	osteoporosis, and/or an
	infectious disease as described
	below under "Infectious
	Disease"). An additional
	preferred indication is
	idiopathic pulmonary fibrosis.
	Preferred indications include

					anemia, pancytopenia, leukopenia, thrombocytopenia, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, and
465	HPWAY46	1413	Activation of transcription through STAT6 response element in immune cells (such as T-cells).	Assays for the activation of transcription through the Signal Transducers and Activators of Transcription (STAT6) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate STAT6 transcription factors and modulate the expression of multiple genes. Exemplary	A highly preferred indication is allergy. Another highly preferred indication is asthma. Additional highly preferred indications include inflammation and inflammatory disorders. Preferred indications include blood disorders (e.g., as described below under "Immune Activity," "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include

assays for transcription	autoimmune diseases (e.g.,
through the STAT6 response	
element that may be used or	
routinely modified to test	sclerosis and/or as described
STAT6 response element	below) and
activity of the polypeptides of	s of immunodeficiencies (e.g., as
the invention (including	described below).
antibodies and agonists or	Preferred indications include
antagonists of the invention)	n) neoplastic diseases (e.g.,
include assays disclosed in	ı leukemia, lymphoma,
Berger et al., Gene 66:1-10	melanoma, and/or as described
(1998); Cullen and Malm,	below under
Methods in Enzymol 216:362-	362- "Hyperproliferative
368 (1992); Henthorn et al.,	., Disorders"). Preferred
Proc Natl Acad Sci USA	indications include neoplasms
85:6342-6346 (1988); Georas	oras and cancers, such as, leukemia,
et al., Blood 92(12):4529-4538	
(1998); Moffatt et al.,	
Transplantation 69(7):1521-	1- pancreatic, esophageal,
1523 (2000); Curiel et al., Eur	Eur stomach, brain, liver and
J Immunol 27(8):1982-1987	37 urinary cancer. Other preferred
(1997); and Masuda et al., J	J indications include benign
Biol Chem 275(38):29331-	
29337 (2000), the contents of	s of   pre-neoplastic conditions, such
each of which are herein	as, for example, hyperplasia,
incorporated by reference in its	its
entirety. T cells that may be	be Preferred indications include
used according to these assays	tys
are publicly available (e.g.,	
through the ATCC).	Hodgkin's disease, acute
Exemplary T cells that may be	y be   lymphocytic anemia (ALL),

l i==i	HPWDJ42	1414	Inhibition of	used account to these assays include the SUPT cell line, which is a suspension culture of IL-2 and IL-4 responsive T cells.  Reporter Assay: construct	plasmacytomas, multiple myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious
ri I	77 77 75	41414	squalene synthetase gene transcription.	contains regulatory and coding sequence of squalene synthetase, the first specific enzyme in the cholesterol biosynthetic pathway. See Jiang, et al., J. Biol. Chem. 268:12818-128241(993), the contents of which are herein incorporated by reference in its entirety. Cells were treated with SID supernatants, and SEAP activity was measured after 72 hours. HepG2 is a	

				human hepatocellular	
				carcinoma cell line (ATCC	
-				HB-8065). See Knowles et al.,	
				Science. 209:497-9 (1980), the	
				contents of which are herein	
	-			incorporated by reference in its	
		:		entirety.	And the second s
	HPWDJ42	1414	Activation of	Assays for the activation of	Highly preferred indications
466			transcription	transcription through the	include blood disorders (e.g.,
			through NFAT	Nuclear Factor of Activated T	as described below under
			response in immune	cells (NFAT) response element	"Immune Activity", "Blood-
			cells (such as T-	are well-known in the art and	Related Disorders", and/or
			cells).	may be used or routinely	"Cardiovascular Disorders").
				modified to assess the ability	Highly preferred indications
				of polypeptides of the	include autoimmune diseases
				invention (including antibodies	(e.g., rheumatoid arthritis,
				and agonists or antagonists of	systemic lupus erythematosis,
				the invention) to regulate	multiple sclerosis and/or as
				NFAT transcription factors and	described below),
				modulate expression of genes	immunodeficiencies (e.g., as
				involved in	described below), boosting a T
				immunomodulatory functions.	cell-mediated immune
				Exemplary assays for	response, and suppressing a T
				transcription through the	cell-mediated immune
				NFAT response element that	response. Additional highly
-				may be used or routinely	preferred indications include
				modified to test NFAT-	inflammation and
				response element activity of	inflammatory disorders. An
				polypeptides of the invention	additional highly preferred
				(including antibodies and	indication is infection (e.g., an
				agonists or antagonists of the	infectious disease as described

10		invention) include assays	below under "Infections
		disclosed in Berner et al Gene	Disease") Preferred
		disclosed in Berger et al., Celle	indications include accordants
		66:1-10 (1998); Cullen and	indications include neoplastic
		Malm, Methods in Enzymol	diseases (e.g., leukemia,
	-	216:362-368 (1992); Henthorn	lymphoma, and/or as described
		et al., Proc Natl Acad Sci USA	below under
		85:6342-6346 (1988); Serfling	"Hyperproliferative
		et al., Biochim Biophys Acta	Disorders"). Preferred
		1498(1):1-18 (2000); De Boer	indications include neoplasms
		et al., Int J Biochem Cell Biol	and cancers, such as, for
		31(10):1221-1236 (1999);	example, leukemia, lymphoma,
		Fraser et al., Eur J Immunol	and prostate, breast, lung,
		29(3):838-844 (1999); and	colon, pancreatic, esophageal,
		Yeseen et al., J Biol Chem	stomach, brain, liver and
		268(19):14285-14293 (1993),	urinary cancer. Other preferred
		the contents of each of which	indications include benign
		are herein incorporated by	dysproliferative disorders and
	-	reference in its entirety. T	pre-neoplastic conditions, such
		cells that may be used	as, for example, hyperplasia,
		according to these assays are	metaplasia, and/or dysplasia.
		publicly available (e.g.,	Preferred indications also
		through the ATCC).	include anemia, pancytopenia,
		Exemplary human T cells that	leukopenia, thrombocytopenia,
		may be used according to these	Hodgkin's disease, acute
		assays include the JURKAT	lymphocytic anemia (ALL),
-		cell line, which is a suspension	plasmacytomas, multiple
		culture of leukemia cells that	myeloma, Burkitt's lymphoma,
		produce IL-2 when stimulated.	arthritis, AIDS, granulomatous
			disease, inflammatory bowel
			disease, sepsis, neutropenia,
			neutrophilia, psoriasis,

HPZAB47	1415	Activation of T-Cell p38 or JNK	Kinase assay. JNK and p38 kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or	reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, asthma and allergy.  Preferred indications include neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), blood disorders (e.g., as described below under	
			routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote or inhibit immune cell (e.g. T-cell) proliferation, activation, and apoptosis. Exemplary assays for JNK and p38 kinase activity that may be used or routinely modified to test JNK and p38 kinase-induced activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Forrer et al., Biol	"Immune Activity", "Cardiovascular Disorders", and/or "Blood-Related Disorders"), and infection (e.g., an infectious disease as described below under "Infectious Disease"). Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Additional highly preferred indications include inflammation and inflammatory disorders.	

	Chem 379(8-9):1101-1110	Highly preferred indications
	(1998); Gupta et al., Exp Cell	also include neoplastic
	Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
	Kyriakis JM, Biochem Soc	lymphoma, and/or as described
	Symp 64:29-48 (1999); Chang	below under
	and Karin, Nature	"Hyperproliferative
	410(6824):37-40 (2001); and	Disorders"). Highly preferred
	Cobb MH, Prog Biophys Mol	indications include neoplasms
	Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
	the contents of each of which	lymphoma, prostate, breast,
	are herein incorporated by	lung, colon, pancreatic,
	reference in its entirety. T	esophageal, stomach, brain,
	cells that may be used	liver, and urinary cancer. Other
	according to these assays are	preferred indications include
 	publicly available (e.g.,	benign dysproliferative
	through the ATCC).	disorders and pre-neoplastic
	Exemplary mouse T cells that	conditions, such as, for
	may be used according to these	example, hyperplasia,
	assays include the CTLL cell	metaplasia, and/or dysplasia.
	line, which is an IL-2	Preferred indications include
	dependent suspension-culture	arthritis, asthma, AIDS,
 	cell line with cytotoxic	allergy, anemia, pancytopenia,
	activity.	leukopenia, thrombocytopenia,
		Hodgkin"s disease, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt"s lymphoma,
		granulomatous disease,
		inflammatory bowel disease,
_		sepsis, psoriasis, suppression
		of immune reactions to

					transplanted organs and tissues, endocarditis, meningitis, and Lyme Disease.
467	HPZAB47	1415	CD152 in Human T cells		
467	HPZAB47	1415	Activation of transcription through NFKB response element in neuronal cells (such as SKNMC cells).	Assays for the activation of transcription through the NFKB response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFKB transcription factors and modulate expression of neuronal genes. Exemplary assays for transcription through the NFKB response element that may be used or routinely modified to test NFKB-response element activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in: Gill JS, et al., Neurobiol Dis, 7(4):448-461 (2000); Tamatani M, et al., J Biol Chem, 274(13):8531-	Preferred embodiments of the invention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of Neurological Diseases and Disorders (e.g. Alzheimer"s Disease, Parkinson's Disease, Brain Cancer, Seizures).

				8538 (1999); Berger et al.,	
				and Malm, Methods in	
				Enzymol 216:362-368 (1992);	
				Henthorn et al., Proc Natl	
				Acad Sci USA 85:6342-6346	
				(1988); Valle Blazquez et al,	
				Immunology 90(3):455-460	
				(1997); Aramburau et al., J	
				Exp Med 82(3):801-810	
				(1995); and Fraser et al.,	
				29(3):838-844 (1999), the	
				contents of each of which are	
				herein incorporated by	
				reference in its entirety.	
				Neuronal cells that may be	
				used according to these assays	
				are publicly available (e.g.,	
				through the ATCC).	
				Exemplary neuronal cells that	
				may be used according to these	
				assays include the SKNMC	
				neuronal cell line.	
	HRAAB15	1416	Activation of T-	Kinase assay. JNK and p38	Preferred indications include
468			Cell p38 or JNK	kinase assays for signal	neoplastic diseases (e.g., as
			Signaling Pathway.	transduction that regulate cell	described below under
				proliferation, activation, or	"Hyperproliferative
				apoptosis are well known in	Disorders"), blood disorders
				the art and may be used or	(e.g., as described below under
				routinely modified to assess	"Immune Activity",
				the ability of polypeptides of	"Cardiovascular Disorders",

		the invention (including	and/or "Blood-Related
		antibodies and agonists or	Disorders"), and infection
		antagonists of the invention) to	(e.g., an infectious disease as
		promote or inhibit immune cell	described below under
	-	(e.g. T-cell) proliferation,	"Infectious Disease"). Highly
		activation, and apoptosis.	preferred indications include
		Exemplary assays for JNK and	autoimmune diseases (e.g.,
		p38 kinase activity that may be	rheumatoid arthritis, systemic
		used or routinely modified to	lupus erythematosis, multiple
		test JNK and p38 kinase-	sclerosis and/or as described
	-	induced activity of	below) and
		polypeptides of the invention	immunodeficiencies (e.g., as
		(including antibodies and	described below). Additional
		agonists or antagonists of the	highly preferred indications
		invention) include the assays	include inflammation and
		disclosed in Forrer et al., Biol	inflammatory disorders.
-		Chem 379(8-9):1101-1110	Highly preferred indications
		(1998); Gupta et al., Exp Cell	also include neoplastic
		Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
		Kyriakis JM, Biochem Soc	lymphoma, and/or as described
		Symp 64:29-48 (1999); Chang	below under
		and Karin, Nature	"Hyperproliferative
		410(6824):37-40 (2001); and	Disorders"). Highly preferred
		Cobb MH, Prog Biophys Mol	indications include neoplasms
		Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
		the contents of each of which	lymphoma, prostate, breast,
		are herein incorporated by	lung, colon, pancreatic,
	-	reference in its entirety. T	esophageal, stomach, brain,
		cells that may be used	liver, and urinary cancer. Other
		according to these assays are	preferred indications include
		publicly available (e.g.,	benign dysproliferative

				through the ATCC).	disorders and pre-neoplastic
				Exemplary mouse T cells that	conditions, such as, for
				may be used according to these	example, hyperplasia,
				assays include the CTLL cell	metaplasia, and/or dysplasia.
				line, which is an IL-2	Preferred indications include
				dependent suspension-culture	arthritis, asthma, AIDS,
				cell line with cytotoxic	allergy, anemia, pancytopenia,
				activity.	leukopenia, thrombocytopenia,
					Hodgkin"s disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt"s lymphoma,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, psoriasis, suppression
					of immune reactions to
					transplanted organs and
					tissues, endocarditis,
					meningitis, and Lyme Disease.
	HRAAB15	1416	Production of	IFNgamma FMAT. IFNg plays	A highly preferred
468			IFNgamma using a	a central role in the immune	embodiment of the invention
			T cells	system and is considered to be	includes a method for
				a proinflammatory cytokine.	stimulating the production of
				IFNg promotes TH1 and	IFNg. An alternative highly
				inhibits TH2 differentiation;	preferred embodiment of the
				promotes IgG2a and inhibits	invention includes a method
				IgE secretion; induces	ΞΞ
				macrophage activation; and	IFNg. Highly preferred
				increases MHC expression.	indications include blood
				Assays for immunomodulatory	disorders (e.g., as described
				proteins produced by T cells	below under "Immune

and NK cells that regulate a	Activity", "Blood-Related
variety of inflammatory	Disorders", and/or
activities and inhibit TH2	"Cardiovascular Disorders"),
helper cell functions are well	and infection (e.g., viral
known in the art and may be	infections, tuberculosis,
used or routinely modified to	infections associated with
assess the ability of	chronic granulomatosus
polypeptides of the invention	disease and malignant
(including antibodies and	osteoporosis, and/or as
agonists or antagonists of the	described below under
invention) to mediate	"Infectious Disease"). Highly
immunomodulation, regulate	preferred indications include
inflammatory activities,	autoimmune disease (e.g.,
modulate TH2 helper cell	rheumatoid arthritis, systemic
function, and/or mediate	lupus erythematosis, multiple
humoral or cell-mediated	sclerosis and/or as described
immunity. Exemplary assays	below), immunodeficiency
that test for	(e.g., as described below),
immunomodulatory proteins	boosting a T cell-mediated
 evaluate the production of	immune response, and
cytokines, such as Interferon	suppressing a T cell-mediated
gamma (IFNg), and the	immune response. Additional
activation of T cells. Such	highly preferred indications
assays that may be used or	include inflammation and
routinely modified to test	inflammatory disorders.
immunomodulatory activity of	Additional preferred
polypeptides of the invention	indications include idiopathic
(including antibodies and	pulmonary fibrosis. Highly
agonists or antagonists of the	preferred indications include
invention) include the assays	neoplastic diseases (e.g.,
disclosed in Miraglia et al., J	leukemia, lymphoma,

	Bion	Biomolecular Screening 4:193-	melanoma, and/or as described
	204 (	204 (1999); Rowland et al.,	below under
	"Lyn	"Lymphocytes: a practical	"Hyperproliferative
	appro	approach" Chapter 6:138-160	Disorders"). Highly preferred
	(2000	(2000); Gonzalez et al., J Clin	indications include neoplasms
	Lab	Lab Anal 8(5):225-233 (1995);	and cancers, such as, for
-	Billia	Billiau et al., Ann NY Acad	example, leukemia, lymphoma,
	Sci 8	Sci 856:22-32 (1998); Boehm	melanoma, and prostate,
	et al.	et al., Annu Rev Immunol	breast, lung, colon, pancreatic,
	15:74	15:749-795 (1997), and	esophageal, stomach, brain,
	Rheu	Rheumatology (Oxford)	liver and urinary cancer. Other
	38(3)	38(3):214-20 (1999), the	preferred indications include
	conte	contents of each of which are	benign dysproliferative
	herei	herein incorporated by	disorders and pre-neoplastic
	refere	reference in its entirety.	conditions, such as, for
	Hum	Human T cells that may be	example, hyperplasia,
	pesn	used according to these assays	metaplasia, and/or dysplasia.
	may	may be isolated using	Preferred indications include
-	techn	techniques disclosed herein or	anemia, pancytopenia,
	other	otherwise known in the art.	leukopenia, thrombocytopenia,
	Hum	Human T cells are primary	Hodgkin's disease, acute
	emn4	human lymphocytes that	lymphocytic anemia (ALL),
	matu	mature in the thymus and	plasmacytomas, multiple
	expre	express a T Cell receptor and	myeloma, Burkitt's lymphoma,
	CD3,	CD3, CD4, or CD8. These	arthritis, AIDS, granulomatous
	cells	cells mediate humoral or cell-	disease, inflammatory bowel
	medi	mediated immunity and may	disease, sepsis, neutropenia,
	be pr	be preactivated to enhance	neutrophilia, psoriasis,
	respo	responsiveness to	suppression of immune
	mmi	immunomodulatory factors.	reactions to transplanted
			organs and tissues,

					hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, asthma and allergy.
469	HRABA80	1417	Insulin Secretion	Assays for measuring secretion of insulin are well-known in the art and may be used or routinely modified to assess	A highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication
				the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to	associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure,
				stimulate insulin secretion. For example, insulin secretion is measured by FMAT using	nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below)
				Insulin secretion from pancreatic beta cells is upregulated by glucose and also by certain	diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel
·				proteins/peptides, and disregulation is a key component in diabetes. Exemplary assays that may be used or routinely modified to	blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness,
				test for stimulation of insulin secretion (from pancreatic cells) by polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays	nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other

	disclosed	disclosed in: Shimizu H et	diseases and disorders as
	Photogram Is	-	described in the
	(2000): Sa	(2000): Salanatek A M. et al	"Cardiovascular Disorders"
	Mol Endo	Mol Endocrinol, 13(8):1305-	section below) dyslinidemia.
	17 (1999);	17 (1999); Filipsson, K., et al.,	endocrine disorders (as
	Ann N Y	Ann N Y Acad Sci, 865:441-4	described in the "Endocrine
	IO (1998); OI	(1998); Olson, L.K., et al., J	Disorders" section below),
	Biol Chem	Biol Chem, 271(28):16544-52	neuropathy, vision impairment
	(1996); an	(1996); and, Miraglia S et. al.,	(e.g., diabetic retinopathy and
	Journal of	Journal of Biomolecular	blindness), ulcers and impaired
	Screening	Screening, 4:193-204 (1999),	wound healing, and infection
	the conten	the contents of each of which	(e.g., infectious diseases and
-	is herein ii	is herein incorporated by	disorders as described in the
	reference	reference in its entirety.	"Infectious Diseases" section
	Pancreatic	Pancreatic cells that may be	below, especially of the
	used accor	used according to these assays	urinary tract and skin), carpal
	are public	are publicly available (e.g.,	tunnel syndrome and
	through th	through the ATCC) and/or	Dupuytren's contracture).
	may be ro	may be routinely generated.	An additional highly preferred
	Exemplary	Exemplary pancreatic cells that	indication is obesity and/or
	may be us	may be used according to these	complications associated with
	assays inc	assays include HITT15 Cells.	obesity. Additional highly
	HITT15 aı	HITT15 are an adherent	preferred indications include
	epithelial	epithelial cell line established	weight loss or alternatively,
	from Syria	from Syrian hamster islet cells	weight gain. Additional highly
	transforme	transformed with SV40. These	preferred indications are
	cells expre	cells express glucagon,	complications associated with
	somatostatin, and	tin, and	insulin resistance.
	glucocorti	glucocorticoid receptors. The	
	cells secre	cells secrete insulin, which is	
	stimulated	stimulated by glucose and	

				glucagon and suppressed by somatostatin or	
				glucocorticoids. ATTC# CRL-	
				1777 Refs: Lord and	
				Ashcroft. Biochem. J. 219:	
				547-551; Santerre et al. Proc.	
				Natl. Acad. Sci. USA 78:	
				4339-4343, 1981.	
	HRABA80	1417	CD152 in Human T		
469			cells		
	HRABA80	1417	Activation of	Kinase assay. Kinase assays,	A highly preferred
469			Endothelial Cell	for example an Elk-1 kinase	embodiment of the invention
			ERK Signaling	assay, for ERK signal	includes a method for
			Pathway.	transduction that regulate cell	stimulating endothelial cell
				proliferation or differentiation	growth. An alternative highly
				are well known in the art and	preferred embodiment of the
				may be used or routinely	invention includes a method
		·		modified to assess the ability	for inhibiting endothelial cell
				of polypeptides of the	growth. A highly preferred
				invention (including antibodies	embodiment of the invention
				and agonists or antagonists of	includes a method for
				the invention) to promote or	stimulating endothelial cell
				inhibit cell proliferation,	proliferation. An alternative
				activation, and differentiation.	highly preferred embodiment
				Exemplary assays for ERK	of the invention includes a
				kinase activity that may be	method for inhibiting
				used or routinely modified to	endothelial cell proliferation.
				test ERK kinase-induced	A highly preferred
				activity of polypeptides of the	embodiment of the invention
				invention (including antibodies	includes a method for
				and agonists or antagonists of	stimulating apoptosis of

		the invention) include the	endothelial cells. An
		assays disclosed in Forrer et	alternative highly preferred
		al., Biol Chem 379(8-9):1101-	embodiment of the invention
		1110 (1998); Berra et al.,	includes a method for
		Biochem Pharmacol	inhibiting (e.g., decreasing)
		60(8):1171-1178 (2000);	apoptosis of endothelial cells.
		Gupta et al., Exp Cell Res	A highly preferred
		247(2):495-504 (1999); Chang	embodiment of the invention
		and Karin, Nature	includes a method for
		410(6824):37-40 (2001); and	stimulating (e.g., increasing)
		Cobb MH, Prog Biophys Mol	endothelial cell activation. An
		Biol 71(3-4):479-500 (1999);	alternative highly preferred
		the contents of each of which	embodiment of the invention
-		are herein incorporated by	includes a method for
		reference in its entirety.	inhibiting the activation of
		Endothelial cells that may be	(e.g., decreasing) and/or
		used according to these assays	inactivating endothelial cells.
		are publicly available (e.g.,	A highly preferred
		through the ATCC).	embodiment of the invention
		Exemplary endothelial cells	includes a method for
		that may be used according to	stimulating endothelial cell
		these assays include human	differentiation. An alternative
		umbilical vein endothelial cells	highly preferred embodiment
		(HUVEC), which are	of the invention includes a
		endothelial cells which line	method for inhibiting
		venous blood vessels, and are	endothelial cell differentiation.
_		involved in functions that	A highly preferred
		include, but are not limited to,	embodiment of the invention
	-	angiogenesis, vascular	includes a method for
		permeability, vascular tone,	stimulating angiogenisis. An
		and immune cell extravasation.	alternative highly preferred

	embodiment of the invention
	includes a method for
	inhibiting angiogenesis.
	A highly preferred
 	embodiment of the invention
 	includes a method for reducing
	cardiac hypertrophy. An
 	alternative highly preferred
	embodiment of the invention
	includes a method for inducing
	cardiac hypertrophy. Highly
	preferred indications include
	neoplastic diseases (e.g., as
	described below under
 	"Hyperproliferative
	Disorders"), and disorders of
	the cardiovascular system
	(e.g., heart disease, congestive
	heart failure, hypertension,
	aortic stenosis,
	cardiomyopathy, valvular
	regurgitation, left ventricular
 	dysfunction, atherosclerosis
	and atherosclerotic vascular
	disease, diabetic nephropathy,
	intracardiac shunt, cardiac
	hypertrophy, myocardial
	infarction, chronic
	hemodynamic overload, and/or
	as described below under
	"Cardiovascular Disorders").

			Highly preferred indications
		9	include cardiovascular, endothelial and/or angiogenic
		0	disorders (e.g., systemic
		5	disorders that affect vessels
		8	such as diabetes mellitus, as
			well as diseases of the vessels
			themselves, such as of the
		8	arteries, capillaries, veins
		<u> </u>	and/or lymphatics). Highly
		<u> </u>	preferred are indications that
		S	stimulate angiogenesis and/or
		3	cardiovascularization. Highly
			preferred are indications that
		<del></del>	inhibit angiogenesis and/or
		3	cardiovascularization.
		I	Highly preferred indications
		<u> </u>	include antiangiogenic activity
		<del></del>	to treat solid tumors,
			leukemias, and Kaposi"s
	-	S	sarcoma, and retinal disorders.
		1	Highly preferred indications
		.=	include neoplasms and cancer,
		<u>s</u>	such as, Kaposi"s sarcoma,
			hemangioma (capillary and
		5	cavernous), glomus tumors,
		±	telangiectasia, bacillary
		<u></u>	angiomatosis,
			hemangioendothelioma,
		0	angiosarcoma,
-		4	haemangiopericytoma,

emoionehanvi	
lymphangiosa	lymphangiosarcoma. Highly
preferred indications also	cations also
include cancers such as,	rs such as,
prostate, breas	prostate, breast, lung, colon,
pancreatic, esophageal,	ophageal,
 stomach, brain, liver, and	in, liver, and
urinary cancer. Preferred	r. Preferred
indications include benign	clude benign
dysproliferativ	dysproliferative disorders and
pre-neoplastic	pre-neoplastic conditions, such
as, for exampl	as, for example, hyperplasia,
 metaplasia, an	metaplasia, and/or dysplasia.
Highly preferr	Highly preferred indications
also include at	also include arterial disease,
such as, atherosclerosis,	osclerosis,
hypertension,	hypertension, coronary artery
disease, inflammatory	nmatory
 vasculitides, Reynaud"s	Reynaud"s
disease and Reynaud"s	eynaud"s
phenomenom, aneurysms,	, aneurysms,
restenosis; venous and	nous and
   Iymphatic disc	lymphatic disorders such as
thrombophlebitis,	itis,
lymphangitis, and	and
lymphedema; and other	and other
vascular disorders such as	ders such as
peripheral vascular disease,	scular disease,
and cancer.	Highly
preferred indications also	cations also
include trauma such as	a such as

	wounds hums and injured
	tions (or a social at initial
	ussue (e.g., vascular injury
	such as, injury resulting from
	balloon angioplasty, and
	atheroschlerotic lesions),
	implant fixation, scarring,
	ischemia reperfusion injury,
 	rheumatoid arthritis,
	cerebrovascular disease, renal
	diseases such as acute renal
	failure, and osteoporosis.
	Additional highly preferred
	indications include stroke,
	graft rejection, diabetic or
	other retinopathies, thrombotic
	and coagulative disorders,
	vascularitis, lymph
	angiogenesis, sexual disorders,
	age-related macular
	degeneration, and treatment
	/prevention of endometriosis
	and related conditions.
	Additional highly preferred
	indications include fibromas,
	heart disease, cardiac arrest,
	heart valve disease, and
	vascular disease.
	Preferred indications include
	blood disorders (e.g., as
	described below under
	"Immune Activity", "Blood-

					Related Disorders", and/or
					"Cardiovascular Disorders").
					Preferred indications include
					autoimmune diseases (e.g.,
					rheumatoid arthritis, systemic
					lupus erythematosis, multiple
					sclerosis and/or as described
					below) and
					immunodeficiencies (e.g., as
					described below). Additional
					preferred indications include
					inflammation and
					inflammatory disorders (such
					as acute and chronic
					inflammatory diseases, e.g.,
					inflammatory bowel disease
					and Crohn's disease), and pain
					management.
	HRACD15	1418	Regulation of	Assays for the regulation of	A highly preferred
470			transcription of	transcription of Malic Enzyme	indication is diabetes mellitus.
			Malic Enzyme in	are well-known in the art and	An additional highly preferred
			hepatocytes	may be used or routinely	indication is a complication
				modified to assess the ability	associated with diabetes (e.g.,
				of polypeptides of the	diabetic retinopathy, diabetic
				invention (including antibodies	nephropathy, kidney disease
				and agonists or antagonists of	(e.g., renal failure,
				the invention) to regulate	nephropathy and/or other
				transcription of Malic Enzyme,	diseases and disorders as
				a key enzyme in lipogenesis.	described in the "Renal
				Malic enzyme is involved in	Disorders" section below),
				lipogenesisand its expression is	diabetic neuropathy, nerve

																		_								_			
disease and nerve damage (e.g., due to diabetic	neuropathy), blood vessel	blockage, heart disease, stroke,	impotence (e.g., due to diabetic	neuropathy or blood vessel	blockage), seizures, mental	confusion, drowsiness,	nonketotic hyperglycemic-	hyperosmolar coma,	cardiovascular disease (e.g.,	heart disease, atherosclerosis,	microvascular disease,	hypertension, stroke, and other	diseases and disorders as	described in the	"Cardiovascular Disorders"	section below), dyslipidemia,	endocrine disorders (as	described in the "Endocrine	Disorders" section below),	neuropathy, vision impairment	(e.g., diabetic retinopathy and	blindness), ulcers and impaired	wound healing, and infection	(e.g., infectious diseases and	disorders as described in the	"Infectious Diseases" section	below, especially of the	urinary tract and skin), carpal	tunnel syndrome and
stimulted by insulin. ME promoter contains two direct	repeat (DR1)- like elements	MEp and MEd identified as	putative PPAR response	elements. ME promoter may	also responds to AP1 and other	transcription factors.	Exemplary assays that may be	used or routinely modified to	test for regulation of	transcription of Malic Enzyme	(in hepatocytes) by	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include assays	disclosed in: Streeper, R.S., et	al., Mol Endocrinol,	12(11):1778-91 (1998);	Garcia-Jimenez, C., et al., Mol	Endocrinol, 8(10):1361-9	(1994); Barroso, I., et al., J	Biol Chem, 274(25):17997-	8004 (1999); Ijpenberg, A., et	al., J Biol Chem,	272(32):20108-20117 (1997);	Berger, et al., Gene 66:1-10	(1988); and, Cullen, B., et al.,	Methods in Enzymol.	216:362–368 (1992), the
														-									-						

				contents of each of which is	Dupuytren's contracture).
				reference in its entirety.	indication is obesity and/or
				Hepatocytes that may be used	complications associated with
				according to these assays are	obesity. Additional highly
				publicly available (e.g.,	preferred indications include
				through the ATCC) and/or	r alterna
				may be routinely generated.	weight gain. Aditional
				Exemplary hepatocytes that	highly preferred indications are
				may be used according to these	complications associated with
				assays includes the mouse	insulin resistance.
				3T3-L1 cell line. 3T3-L1 is a	
				mouse preadipocyte cell line	
				(adherent). It is a continuous	
				substrain of 3T3 fibroblasts	
				developed through clonal	
				isolation. Cells undergo a pre-	
				adipocyte to adipose-like	
				conversion under appropriate	
				differentiation culture	
				conditions.	
	HRACD15	1418	Activation of T-	Kinase assay. JNK and p38	Preferred indications include
470			Cell p38 or JNK	kinase assays for signal	neoplastic diseases (e.g., as
			Signaling Pathway.	transduction that regulate cell	described below under
				proliferation, activation, or	"Hyperproliferative
				apoptosis are well known in	Disorders"), blood disorders
				the art and may be used or	(e.g., as described below under
				routinely modified to assess	"Immune Activity",
				the ability of polypeptides of	"Cardiovascular Disorders",
				the invention (including	and/or "Blood-Related
				antibodies and agonists or	Disorders"), and infection

antagonists of the invention) to	(e.g., an infectious disease as
promote or inhibit immune cell	described below under
(e.g. T-cell) proliferation,	"Infectious Disease"). Highly
activation, and apoptosis.	preferred indications include
Exemplary assays for JNK and	autoimmune diseases (e.g.,
p38 kinase activity that may be	rheumatoid arthritis, systemic
used or routinely modified to	lupus erythematosis, multiple
test JNK and p38 kinase-	sclerosis and/or as described
induced activity of	below) and
polypeptides of the invention	immunodeficiencies (e.g., as
(including antibodies and	described below). Additional
agonists or antagonists of the	highly preferred indications
invention) include the assays	include inflammation and
disclosed in Forrer et al., Biol	inflammatory disorders.
Chem 379(8-9):1101-1110	Highly preferred indications
(1998); Gupta et al., Exp Cell	also include neoplastic
Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
Kyriakis JM, Biochem Soc	lymphoma, and/or as described
Symp 64:29-48 (1999); Chang	below under
and Karin, Nature	"Hyperproliferative
410(6824):37-40 (2001); and	Disorders"). Highly preferred
Cobb MH, Prog Biophys Mol	indications include neoplasms
Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
the contents of each of which	lymphoma, prostate, breast,
are herein incorporated by	lung, colon, pancreatic,
reference in its entirety. T	esophageal, stomach, brain,
cells that may be used	liver, and urinary cancer. Other
according to these assays are	preferred indications include
publicly available (e.g.,	benign dysproliferative
through the ATCC).	disorders and pre-neoplastic
Exemplary mouse T cells that	conditions, such as, for

				may be used according to these assays include the CTLL cell line, which is an IL-2 dependent suspension-culture cell line with cytotoxic activity.	example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include arthritis, asthma, AIDS, allergy, anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin"s disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt"s lymphoma, granulomatous disease, inflammatory bowel disease, sepsis, psoriasis, suppression of immune reactions to transplanted organs and tissues, endocarditis, meninoitis, and I vme Disease
470	HRACD15	1418	SEAP in HIB/CRE		
470	HRACD15	1418	Regulation of apoptosis of immune cells (such as mast cells).	Caspase Apoptosis. Assays for caspase apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate caspase protease-mediated apoptosis in immune cells (such as, for example, in mast cells). Mast	Preferred embodiments of the invention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of asthma, allergy, hypersensitivity and inflammation.

cells are found in connective	and mucosal tissues throughout	the body, and their activation	via immunoglobulin E -	antigen, promoted by T helper	cell type 2 cytokines, is an	important component of	allergic disease. Dysregulation	of mast cell apoptosis may	play a role in allergic disease	and mast cell tumor survival.	Exemplary assays for caspase	apoptosis that may be used or	routinely modified to test	capase apoptosis activity	induced by polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) include the	assays disclosed in: Masuda A,	et al., J Biol Chem,	276(28):26107-26113 (2001);	Yeatman CF 2nd, et al., J Exp	Med, 192(8):1093-1103	(2000);Lee et al., FEBS Lett	485(2-3): 122-126 (2000); Nor	et al., J Vasc Res 37(3): 209-	218 (2000); and Karsan and	Harlan, J Atheroscler Thromb	3(2): 75-80 (1996); the	contents of each of which are
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470 HRACD15 1418 SEA pron co-st HRACD80 1419 Prod 471	SEAP in Jurkat/IL4 promoter (antiCD3 co-stim) Production of IL-6	IL-6 FMAT. IL-6 is produced	
HRACD80 1419		L-6 FMAT. IL-6 is produced	
		by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced IgE production and increases IgA production (IgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large	A fightly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) IL-6 production. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) IL-6 production. A highly preferred indication is the stimulation or enhancement of mucosal immunity. Highly preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-

	expression level is strongly	"Cardiovascular Disorders"),
	regulated by cytokines, growth	and infection (e.g., as
	factors, and hormones are well	described below under
	known in the art and may be	"Infectious Disease"). Highly
	used or routinely modified to	preferred indications include
	assess the ability of	autoimmune diseases (e.g.,
	polypeptides of the invention	rheumatoid arthritis, systemic
	(including antibodies and	lupus erythematosis, multiple
	agonists or antagonists of the	sclerosis and/or as described
	invention) to mediate	below) and
	immunomodulation and	immunodeficiencies (e.g., as
	differentiation and modulate T	described below). Highly
	cell proliferation and function.	preferred indications also
	Exemplary assays that test for	include boosting a B cell-
	immunomodulatory proteins	mediated immune response
	evaluate the production of	and alternatively suppressing a
	cytokines, such as IL-6, and	B cell-mediated immune
	the stimulation and	response. Highly preferred
	upregulation of T cell	indications include
	proliferation and functional	inflammation and
	activities. Such assays that	inflammatory
	may be used or routinely	disorders.Additional highly
	modified to test	preferred indications include
	immunomodulatory and	asthma and allergy. Highly
	diffferentiation activity of	preferred indications include
	polypeptides of the invention	neoplastic diseases (e.g.,
	(including antibodies and	myeloma, plasmacytoma,
	agonists or antagonists of the	leukemia, lymphoma,
	invention) include assays	melanoma, and/or as described
	disclosed in Miraglia et al., J	below under
	Biomolecular Screening 4:193-	"Hyperproliferative

204(1999); Rowland et al.,	Disorders"). Highly preferred
"Lymphocytes: a practical	indications include neoplasms
approach" Chapter 6:138-160	and cancers, such as, myeloma,
(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
 Immunol 158:2919-2925	lymphoma, melanoma, and
 (1997), the contents of each of	prostate, breast, lung, colon,
which are herein incorporated	pancreatic, esophageal,
by reference in its entirety.	stomach, brain, liver and
Human dendritic cells that may	urinary cancer. Other preferred
 be used according to these	indications include benign
 assays may be isolated using	dysproliferative disorders and
techniques disclosed herein or	pre-neoplastic conditions, such
otherwise known in the art.	as, for example, hyperplasia,
Human dendritic cells are	metaplasia, and/or dysplasia.
antigen presenting cells in	Preferred indications include
suspension culture, which,	anemia, pancytopenia,
when activated by antigen	leukopenia, thrombocytopenia,
and/or cytokines, initiate and	Hodgkin's disease, acute
upregulate T cell proliferation	lymphocytic anemia (ALL),
and functional activities.	multiple myeloma, Burkitt's
	lymphoma, arthritis, AIDS,
	granulomatous disease,
	inflammatory bowel disease,
	sepsis, neutropenia,
	neutrophilia, psoriasis,
	suppression of immune
	reactions to transplanted
	organs and tissues,
	hemophilia, hypercoagulation,
	diabetes mellitus, endocarditis,
	meningitis, and Lyme Disease.

					An additonal preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
472	HRDDV47	1420	CD71 in Human T cells		
472	HRDDV47	1420	IL-10 in Human T-cell 2B9		
473	HRDFD27	1421	Activation of	Assays for the activation of	A preferred embodiment of
C .			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha
			immune cells (such	art and may be used or	production. An alternative
			as T-cells).	routinely modified to assess	preferred embodiment of the
				the ability of polypeptides of	invention includes a method
				the invention (including	for stimulating (e.g.,
				antibodies and agonists or	increasing) TNF alpha
				antagonists of the invention) to	production. Preferred
				regulate the serum response	indications include blood
				factors and modulate the	disorders (e.g., as described
				expression of genes involved	below under "Immune
				in growth. Exemplary assays	Activity", "Blood-Related
	_	-		for transcription through the	Disorders", and/or
				SRE that may be used or	"Cardiovascular Disorders"),
				routinely modified to test SRE	Highly preferred indications
				activity of the polypeptides of	include autoimmune diseases
				the invention (including	(e.g., rheumatoid arthritis,
				antibodies and agonists or	systemic lupus erythematosis,
				antagonists of the invention)	Crohn"s disease, multiple
				include assays disclosed in	sclerosis and/or as described

below), immunodeficiencies		immune response, and	suppressing a T cell-mediated	immune response. Additional	highly preferred indications	include inflammation and	inflammatory disorders, and	treating joint damage in	patients with rheumatoid	arthritis. An additional highly	preferred indication is sepsis.	Highly preferred indications	include neoplastic diseases	it (e.g., leukemia, lymphoma,	se	_	Disorders"). Additionally,	highly preferred indications	include neoplasms and	cancers, such as, for example,	leukemia, lymphoma,	melanoma, glioma (e.g.,	malignant glioma), solid	tumors, and prostate, breast,	lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other	preferred indications include	benign dysproliferative
Berger et al., Gene 66:1-10	Methods in Enzymol 216:362-	368 (1992); Henthorn et al.,	Proc Natl Acad Sci USA	85:6342-6346 (1988); and	Black et al., Virus Genes	[ 12(2):105-117 (1997), the	content of each of which are	herein incorporated by	reference in its entirety. T	cells that may be used	according to these assays are	publicly available (e.g.,	through the ATCC).	Exemplary mouse T cells that	may be used according to these	assays include the CTLL cell	line, which is an IL-2	dependent suspension culture	of T cells with cytotoxic	activity.				-					-
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					disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
473	HRDFD27	1421	IL-10 in Human T-cell 2B9		
173	HRDFD27	1421	Activation of	Kinase assay. JNK and p38	A highly preferred
4/3			Endomenal Cen	Killase assays 101 signal	empodifficit of the illveilion

p38 or JNK	transduction that regulate cell	includes a method for
Signaling Pathway.	proliferation, activation, or	stimulating endothelial cell
	apoptosis are well known in	growth. An alternative highly
	the art and may be used or	preferred embodiment of the
	routinely modified to assess	invention includes a method
	the ability of polypeptides of	for inhibiting endothelial cell
	the invention (including	growth. A highly preferred
	antibodies and agonists or	embodiment of the invention
	antagonists of the invention) to	includes a method for
	promote or inhibit cell	stimulating endothelial cell
	proliferation, activation, and	proliferation. An alternative
	apoptosis. Exemplary assays	highly preferred embodiment
	for JNK and p38 kinase	of the invention includes a
	activity that may be used or	method for inhibiting
	routinely modified to test JNK	endothelial cell proliferation.
	and p38 kinase-induced	A highly preferred
	activity of polypeptides of the	embodiment of the invention
	invention (including antibodies	includes a method for
	and agonists or antagonists of	stimulating apoptosis of
	the invention) include the	endothelial cells. An
	assays disclosed in Forrer et	alternative highly preferred
	al., Biol Chem 379(8-9):1101-	embodiment of the invention
	1110 (1998); Gupta et al., Exp	includes a method for
	Cell Res 247(2): 495-504	inhibiting (e.g., decreasing)
	(1999); Kyriakis JM, Biochem	apoptosis of endothelial cells.
	Soc Symp 64:29-48 (1999);	A highly preferred
	Chang and Karin, Nature	embodiment of the invention
	410(6824):37-40 (2001); and	includes a method for
	Cobb MH, Prog Biophys Mol	stimulating (e.g., increasing)
	Biol 71(3-4):479-500 (1999);	endothelial cell activation. An
	the contents of each of which	alternative highly preferred

	are herein incorporated by	embodiment of the invention
 	reference in its entirety.	includes a method for
	Endothelial cells that may be	inhibiting (e.g., decreasing) the
	used according to these assays	activation of and/or
	are publicly available (e.g.,	inactivating endothelial cells.
	through the ATCC).	A highly preferred
	Exemplary endothelial cells	embodiment of the invention
	that may be used according to	includes a method for
	these assays include human	stimulating angiogenisis. An
	umbilical vein endothelial cells	alternative highly preferred
	(HUVEC), which are	embodiment of the invention
	endothelial cells which line	includes a method for
	venous blood vessels, and are	inhibiting angiogenesis. A
	involved in functions that	highly preferred embodiment
	include, but are not limited to,	of the invention includes a
	angiogenesis, vascular	method for reducing cardiac
	permeability, vascular tone,	hypertrophy. An alternative
	and immune cell extravasation.	highly preferred embodiment
-		of the invention includes a
		method for inducing cardiac
		hypertrophy. Highly
		preferred indications include
-		neoplastic diseases (e.g., as
		described below under
		"Hyperproliferative
		Disorders"), and disorders of
		the cardiovascular system
		(e.g., heart disease, congestive
		heart failure, hypertension,
		aortic stenosis,
		cardiomyopathy, valvular

	regurgitation, left ventricular
	dysfunction, atherosclerosis
	and atherosclerotic vascular
	disease, diabetic nephropathy,
	intracardiac shunt, cardiac
	hypertrophy, myocardial
	infarction, chronic
	hemodynamic overload, and/or
	as described below under
	"Cardiovascular Disorders").
	Highly preferred indications
	include cardiovascular,
	endothelial and/or angiogenic
 	disorders (e.g., systemic
	disorders that affect vessels
	such as diabetes mellitus, as
	well as diseases of the vessels
	themselves, such as of the
 	arteries, capillaries, veins
	and/or lymphatics). Highly
	preferred are indications that
	stimulate angiogenesis and/or
	cardiovascularization. Highly
	preferred are indications that
	inhibit angiogenesis and/or
	cardiovascularization.
	Highly preferred indications
	include antiangiogenic activity
	to treat solid tumors,
	leukemias, and Kaposi"s
	sarcoma, and retinal disorders.

			Highly preferred indications
			include neoplasms and cancer,
	-		such as, Kaposi"s sarcoma,
			hemangioma (capillary and
			cavernous), glomus tumors,
			telangiectasia, bacillary
			angiomatosis,
			hemangioendothelioma,
			angiosarcoma,
		-	haemangiopericytoma,
			lymphangioma,
			lymphangiosarcoma. Highly
		-	preferred indications also
			include cancers such as,
			prostate, breast, lung, colon,
			pancreatic, esophageal,
			stomach, brain, liver, and
			urinary cancer. Preferred
-			indications include benign
			dysproliferative disorders and
			pre-neoplastic conditions, such
			as, for example, hyperplasia,
			metaplasia, and/or dysplasia.
			Highly preferred indications
-			also include arterial disease,
			such as, atherosclerosis,
	-		hypertension, coronary artery
			disease, inflammatory
			vasculitides, Reynaud"s
			disease and Reynaud"s
			phenomenom, aneurysms,

		restenosis; venous and
		Symphatic disorders such as
		thrombonblehitis
 		lymphanaitic and
		lymphangins, and
		lymphedema; and other
		vascular disorders such as
	-	peripheral vascular disease,
 		and cancer. Highly
 		preferred indications also
		include trauma such as
		wounds, burns, and injured
		tissue (e.g., vascular injury
		such as, injury resulting from
		balloon angioplasty, and
		atheroschlerotic lesions),
		implant fixation, scarring,
		ischemia reperfusion injury,
		rheumatoid arthritis,
		cerebrovascular disease, renal
		diseases such as acute renal
		failure, and osteoporosis.
		Additional highly preferred
		indications include stroke,
		graft rejection, diabetic or
		other retinopathies, thrombotic
		and coagulative disorders,
		vascularitis, lymph
		angiogenesis, sexual disorders,
		age-related macular
		degeneration, and treatment
		/prevention of endometriosis

					and related conditions.
_					Additional highly preferred
					indications include fibromas,
					heart disease, cardiac arrest,
					heart valve disease, and
					vascular disease.
					Preferred indications include
					blood disorders (e.g., as
					described below under
					"Immune Activity", "Blood-
					Related Disorders", and/or
				-	"Cardiovascular Disorders").
					Preferred indications include
					autoimmune diseases (e.g.,
					rheumatoid arthritis, systemic
					lupus erythematosis, multiple
					sclerosis and/or as described
					below) and
					immunodeficiencies (e.g., as
					described below). Additional
					preferred indications include
					inflammation and
					inflammatory disorders (such
					as acute and chronic
					inflammatory diseases, e.g.,
					inflammatory bowel disease
					and Crohn's disease), and pain
					management.
	HRDFD27	1421	Activation of	Assays for the activation of	Highly preferred indications
473			transcription	transcription through the	include inflammation and
			through NFKB	NFKB response element are	inflammatory disorders.

response element in	well-known in the art and may	Highly preferred indications
manilla enimai	he used or routinely modified	include blood disorders (e a
as natural biller	to assess the ability of	as described below under
as natulal Killel	to assess the ability of	as acscilled octow ander
cells).	polypeptides of the invention	"Immune Activity", "Blood-
	(including antibodies and	Related Disorders", and/or
 	agonists or antagonists of the	"Cardiovascular Disorders").
	invention) to regulate NFKB	Highly preferred indications
	transcription factors and	include autoimmune diseases
	modulate expression of	(e.g., rheumatoid arthritis,
 	immunomodulatory genes.	systemic lupus erythematosis,
	Exemplary assays for	multiple sclerosis and/or as
	transcription through the	described below), and
 	NFKB response element that	immunodeficiencies (e.g., as
	may be used or rountinely	described below). An
	modified to test NFKB-	additional highly preferred
	response element activity of	indication is infection (e.g.,
	polypeptides of the invention	AIDS, and/or an infectious
	(including antibodies and	disease as described below
	agonists or antagonists of the	under "Infectious Disease").
 	invention) include assays	Highly preferred indications
	disclosed in Berger et al., Gene	include neoplastic diseases
-	66:1-10 (1998); Cullen and	(e.g., melanoma, leukemia,
	Malm, Methods in Enzymol	lymphoma, and/or as described
	216:362-368 (1992); Henthorn	below under
	et al., Proc Natl Acad Sci USA	"Hyperproliferative
 	85:6342-6346 (1988); Valle	Disorders"). Highly preferred
	Blazquez et al, Immunology	indications include neoplasms
	90(3):455-460 (1997);	and cancers, such as, for
	Aramburau et al., J Exp Med	example, melanoma, renal cell
 	82(3):801-810 (1995); and	carcinoma, leukemia,
	Fraser et al., 29(3):838-844	lymphoma, and prostate,

				(1999), the contents of each of which are herein incorporated	breast, lung, colon, pancreatic, esophageal, stomach, brain,
				by reference in its entirety.	liver and urinary cancer. Other
				NK cells that may be used	preferred indications include
				according to these assays are	benign dysproliferative
				publicly available (e.g.,	disorders and pre-neoplastic
				through the ATCC).	conditions, such as, for
				Exemplary human NK cells	example, hyperplasia,
				that may be used according to	metaplasia, and/or dysplasia.
				these assays include the NKL	Preferred indications also
				cell line, which is a human	include anemia, pancytopenia,
				natural killer cell line	leukopenia, thrombocytopenia,
				established from the peripheral	Hodgkin's disease, acute
				blood of a patient with large	lymphocytic anemia (ALL),
				granular lymphocytic	plasmacytomas, multiple
				leukemia. This IL-2 dependent	myeloma, Burkitt's lymphoma,
				suspension culture cell line has	arthritis, AIDS, granulomatous
				a morphology resembling that	disease, inflammatory bowel
				of activated NK cells.	disease, sepsis, neutropenia,
					neutrophilia, psoriasis,
	-				hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					suppression of immune
					reactions to transplanted
					organs, asthma and allergy.
474	HROAJ03	1422	IL-4 in HMC		
	HROAJ03	1422	Activation of	Kinase assay. JNK and p38	A highly preferred
474			Endothelial Cell	kinase assays for signal	embodiment of the invention
			p38 or JNK	transduction that regulate cell	includes a method for

Signaling Pathway.	proliferation, activation, or	stimulating endothelial cell
)	apoptosis are well known in	growth. An alternative highly
	the art and may be used or	preferred embodiment of the
	routinely modified to assess	invention includes a method
	the ability of polypeptides of	for inhibiting endothelial cell
	the invention (including	growth. A highly preferred
	antibodies and agonists or	embodiment of the invention
	antagonists of the invention) to	includes a method for
	promote or inhibit cell	stimulating endothelial cell
	proliferation, activation, and	proliferation. An alternative
	apoptosis. Exemplary assays	highly preferred embodiment
	for JNK and p38 kinase	of the invention includes a
	activity that may be used or	method for inhibiting
	routinely modified to test JNK	endothelial cell proliferation.
	and p38 kinase-induced	A highly preferred
	activity of polypeptides of the	embodiment of the invention
	invention (including antibodies	includes a method for
 	and agonists or antagonists of	stimulating apoptosis of
	the invention) include the	endothelial cells. An
	assays disclosed in Forrer et	alternative highly preferred
	al., Biol Chem 379(8-9):1101-	embodiment of the invention
	1110 (1998); Gupta et al., Exp	includes a method for
	Cell Res 247(2): 495-504	inhibiting (e.g., decreasing)
	(1999); Kyriakis JM, Biochem	apoptosis of endothelial cells.
	Soc Symp 64:29-48 (1999);	A highly preferred
	Chang and Karin, Nature	embodiment of the invention
	410(6824):37-40 (2001); and	includes a method for
	Cobb MH, Prog Biophys Mol	stimulating (e.g., increasing)
	Biol 71(3-4):479-500 (1999);	endothelial cell activation. An
 	the contents of each of which	alternative highly preferred
	are herein incorporated by	embodiment of the invention

dystunction, atherosclerosis	and atheroscierotic vascular	disease, diabetic nephropathy,	intracardiac shunt, cardiac	hypertrophy, myocardial	infarction, chronic	hemodynamic overload, and/or	as described below under	"Cardiovascular Disorders").	Highly preferred indications	include cardiovascular,	endothelial and/or angiogenic	disorders (e.g., systemic	disorders that affect vessels	such as diabetes mellitus, as	well as diseases of the vessels	themselves, such as of the	arteries, capillaries, veins	and/or lymphatics). Highly	preferred are indications that	stimulate angiogenesis and/or	cardiovascularization. Highly	preferred are indications that	inhibit angiogenesis and/or	cardiovascularization.	Highly preferred indications	include antiangiogenic activity	to treat solid tumors,	leukemias, and Kaposi"s	sarcoma, and retinal disorders.	Highly preferred indications

include neoplasms and cancer,	hemangioma (capillary and	cavernous), glomus tumors,	telangiectasia, bacillary	angiomatosis,	hemangioendothelioma,	angiosarcoma,	haemangiopericytoma,	lymphangioma,	lymphangiosarcoma. Highly	preferred indications also	include cancers such as,	prostate, breast, lung, colon,	pancreatic, esophageal,	stomach, brain, liver, and	urinary cancer. Preferred	indications include benign	dysproliferative disorders and	pre-neoplastic conditions, such	as, for example, hyperplasia,	metaplasia, and/or dysplasia.	Highly preferred indications	also include arterial disease,	such as, atherosclerosis,	hypertension, coronary artery	disease, inflammatory	vasculitides, Reynaud"s	disease and Reynaud"s	phenomenom, aneurysms,	restenosis; venous and
																*		****			-								
						_								-															

thrombophebitis, such hypphengitis, and lymphengitis, and lymphengitis, and lymphengitis, and lymphengitis, and lymphengitis, and dearen: Highly preferred indications also include trauma such as mounds, burns, and injured tissue (e.g., wascular injury such as, injury resulting from balloon angiophasty, and alteroscherotic lesions), implant fration, searring, ischemia expertusion injury, recebovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, dialude stroke, graft rejection, dialude stroke, graft rejection, dialude stroke, and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, sexual disorders, age-related macular degeneration of endometriosis and related conditions.			lymphatic disorders such as
Immohapingtis, and hymphaedemis, and other vascular disorders such as peripheral vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and alberoschlerotic lesions), implant fixation, searing, ischemia repertusion injury, rheumatoid arthritis, ecrebovascular disease, renal diseases and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thombolic and coagulative disorders, vascularitis, hymph angiogenesis, sexual disorders, secula disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			A 11 11.
lymphaedins; and lymphaedins; and lymphaedins; and vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured itissue (c.g., sexuelar injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, searring, ischemia repertission injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, displate is thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, vascularitis, swall disorders, vascularitis, lymph angiogenesis, sexual disorders, degeneration, and treatment /prevention of endometriosis and related conditions.			thrombophiebitis,
lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angepoplasty, and atheroschlerotic lesions), implant lisation, scarring, ischemia reperfusion injury, rheumanoid arthritis, cerebrovascular disease, renal diseases such as acute renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, vascularitis, lymph angiogenesis, sexual disorders, degeneration, and treatment /prevention of endometriosis and related conditions.			lymphangitis, and
peripheral vascular disorders such as peripheral vascular disease, and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angiophasty, and atheroschlerotice lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute enal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagularive disorders, vascularitis, lymph angiogenesis, sexual disorders, vascularitis, lymph angiogenesis, sexual disorders, prevention of endomentiosis and related macular degeneration, and treatment degeneration, and treatment degeneration, and treatment degeneration and treatment degeneration, and treatment degeneration, and treatment degeneration, and treatment degeneration and treatment defenerations and related conditions.			lymphedema; and other
peripheral vascular disease, and caneer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia repetrisson injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoperosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			vascular disorders such as
and cancer. Highly preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and autheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			peripheral vascular disease,
preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia repertusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment degeneration, and treatment degeneration of endometriosis and related conditions.			and cancer. Highly
include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment hypervention of endometriosis and related conditions.	-		preferred indications also
wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, searning, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment / prevention of endometriosis and related conditions.			include trauma such as
tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, searring, ischemia repertusion injury, rheumatoid arthritis, cerebrovascular disease, remal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment / prevention of endometriosis and related conditions.			wounds, burns, and injured
such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, theumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.		-	tissue (e.g., vascular injury
balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			such as, injury resulting from
atheroschlerotic lesions), implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			balloon angioplasty, and
implant fixation, scarring, ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment (prevention of endometriosis and related conditions.			atheroschlerotic lesions),
ischemia reperfusion injury, rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			implant fixation, scarring,
rheumatoid arthritis, cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis. Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			ischemia reperfusion injury,
cerebrovascular disease, renal diseases such as acute renal failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			rheumatoid arthritis,
diseases such as acute renal failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			cerebrovascular disease, renal
failure, and osteoporosis.  Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			diseases such as acute renal
Additional highly preferred indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			failure, and osteoporosis.
indications include stroke, graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			Additional highly preferred
graft rejection, diabetic or other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			indications include stroke,
other retinopathies, thrombotic and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			graft rejection, diabetic or
and coagulative disorders, vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			other retinopathies, thrombotic
vascularitis, lymph angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			and coagulative disorders,
angiogenesis, sexual disorders, age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			vascularitis, lymph
age-related macular degeneration, and treatment /prevention of endometriosis and related conditions.			angiogenesis, sexual disorders,
degeneration, and treatment /prevention of endometriosis and related conditions.			age-related macular
/prevention of endometriosis and related conditions.			degeneration, and treatment
and related conditions.			/prevention of endometriosis
			and related conditions.

				Additional highly preferred
				indications include fibromas,
				heart disease, cardiac arrest,
				heart valve disease, and
				vascular disease.
				Preferred indications include
				blood disorders (e.g., as
				described below under
				"Immune Activity", "Blood-
	-			Related Disorders", and/or
				"Cardiovascular Disorders").
				Preferred indications include
				autoimmune diseases (e.g.,
				rheumatoid arthritis, systemic
				lupus erythematosis, multiple
				sclerosis and/or as described
				below) and
				immunodeficiencies (e.g., as
				described below). Additional
				preferred indications include
				inflammation and
				inflammatory disorders (such
				as acute and chronic
				inflammatory diseases, e.g.,
				inflammatory bowel disease
				and Crohn's disease), and pain
				management.
HRTAE58	1423	Production of TNF	TNFa FMAT. Assays for	A highly preferred
		alpha by dendritic	immunomodulatory proteins	embodiment of the invention
		cells	produced by activated	includes a method for
			macrophages. T cells.	inhibiting (e.g., decreasing)

TNF alpha production. An alternative highly preferred embodiment of the invention includes a method for	Stimulating (e.g., increasing) TNF alpha production. Highly preferred indications include blood disorders (e.g.,	"Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications	include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, Crohn"s disease, multiple	sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated immune response, and	suppressing a T cell-mediated immune response. Additional highly preferred indications include inflammation and	treating joint damage in patients with rheumatoid arthritis. An additional highly preferred indication is sepsis.
fibroblasts, smooth muscle, and other cell types that exert a wide variety of inflammatory and cytotoxic effects on a	variety of cells are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including	antibodies and agonists or antagonists of the invention) to mediate immunomodulation, modulate inflammation and	cytotoxicity. Exemplary assays that test for immunomodulatory proteins evaluate the production of	cytokines such as tumor necrosis factor alpha (TNFa), and the induction or inhibition of an inflammatory or extotoxic response. Such	assays that may be used or routinely modified to test immunomodulatory activity of polypeptides of the invention	agonists or antagonists of the invention) include assays disclosed in Miraglia et al., J Biomolecular Screening 4:193-

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Highly preferred indications	include neoplastic diseases	(e.g., leukemia, lymphoma,	and/or as described below	under "Hyperproliferative	Disorders"). Additionally,	highly preferred indications	include neoplasms and	cancers, such as, leukemia,	lymphoma, melanoma, glioma	(e.g., malignant glioma), solid	tumors, and prostate, breast,	lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other	preferred indications include	benign dysproliferative	disorders and pre-neoplastic	conditions, such as, for	example, hyperplasia,	metaplasia, and/or dysplasia.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,	Hodgkin's disease, acute	lymphocytic anemia (ALL),	plasmacytomas, multiple	myeloma, Burkitt's lymphoma,	arthritis, AIDS, granulomatous	disease, inflammatory bowel	disease neutronenia
204(1999); Rowland et al.,	"Lymphocytes: a practical	approach" Chapter 6:138-160	(2000); Verhasselt et al., Eur J	Immunol 28(11):3886-3890	(1198); Dahlen et al., J	Immunol 160(7):3585-3593	(1998); Verhasselt et al., J	Immunol 158:2919-2925	(1997); and Nardelli et al., J	Leukoc Biol 65:822-828	(1999), the contents of each of	which are herein incorporated	by reference in its entirety.	Human dendritic cells that may	be used according to these	assays may be isolated using	techniques disclosed herein or	otherwise known in the art.	Human dendritic cells are	antigen presenting cells in	suspension culture, which,	when activated by antigen	and/or cytokines, initiate and	upregulate T cell proliferation	and functional activities.					
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neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").	
	Assays for activation of transcription are well-known in the art and may be used and routinely modified to assess ability of polypeptides of the invention to inhibit or activate transcription. An example of such an assay follows: Cells were pretreated with SID supernatants or controls for 15-18 hours. SEAP activity was measured after 48 hours.  LS174T is an epithelial colon adenocarcinoma cell line. Its tumourigenicity in nude mice make cell line LS174T a model for studies on the mechanism of synthesis and secretion of
	Activation of Transcription
	1423
	HRTAE58
	475

				specific tumoral markers in colon cancer. See, Patan et al., Circ Res, 89(8):732-39 (2001), the contents of which are herein incorporated by reference in its entirety.	
476	HSATR82	1424	Activation of transcription	Assays for the activation of transcription through the	A preferred embodiment of the invention includes a
			through serum response element in	Serum Response Element (SRE) are well-known in the	method for inhibiting (e.g., reducing) TNF alpha
			immune cells (such	art and may be used or routinely modified to assess	production. An alternative
			.(2112)	the ability of polypeptides of	invention includes a method
				the invention (including	for stimulating (e.g.,
				antibodies and agonists or	increasing) TNF alpha
				regulate the serum response	indications include blood
				factors and modulate the	disorders (e.g., as described
				expression of genes involved	below under "Immune
				in growth. Exemplary assays	Activity", "Blood-Related
				for transcription through the	Disorders", and/or
				SRE that may be used or	"Cardiovascular Disorders"),
				activity of the polypeptides of	include autoimmune diseases
				the invention (including	(e.g., rheumatoid arthritis,
				antibodies and agonists or	systemic lupus erythematosis,
				antagonists of the invention)	Crohn"s disease, multiple
				include assays disclosed in	sclerosis and/or as described
				Berger et al., Gene 66:1-10	below), immunodeficiencies
				(1998); Cullen and Malm,	(e.g., as described below),
				Methods in Enzymol 216:362-	boosting a 1 cell-mediated

		368 (1992): Henthorn et al	immune response. and
		Proc Natl Acad Sci USA	suppressing a T cell-mediated
		85:6342-6346 (1988); and	immune response. Additional
		Black et al., Virus Genes	highly preferred indications
		12(2):105-117 (1997), the	include inflammation and
		content of each of which are	inflammatory disorders, and
		herein incorporated by	treating joint damage in
	-	reference in its entirety. T	patients with rheumatoid
		cells that may be used	arthritis. An additional highly
		according to these assays are	preferred indication is sepsis.
		publicly available (e.g.,	Highly preferred indications
		through the ATCC).	include neoplastic diseases
		Exemplary mouse T cells that	(e.g., leukemia, lymphoma,
		may be used according to these	and/or as described below
		assays include the CTLL cell	under "Hyperproliferative
		line, which is an IL-2	Disorders"). Additionally,
		dependent suspension culture	highly preferred indications
		of T cells with cytotoxic	include neoplasms and
		activity.	cancers, such as, for example,
			leukemia, lymphoma,
			melanoma, glioma (e.g.,
			malignant glioma), solid
			tumors, and prostate, breast,
			lung, colon, pancreatic,
			esophageal, stomach, brain,
-			liver and urinary cancer. Other
			preferred indications include
			benign dysproliferative
-			disorders and pre-neoplastic
			conditions, such as, for
!			example, hyperplasia,

					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
1					under "Infectious Disease").
	HSAUK57	1425	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
				by T cells and has strong	embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced	stimulating (e.g., increasing)
				IgE production and increases	IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a

	II6 induces cytotoxic T cells.	method for inhibiting (e.g.,
	Deregulated expression of IL-6	reducing) IL-6 production. A
	has been linked to autoimmune	highly preferrred indication is
	disease, plasmacytomas,	the stimulation or enhancement
	myelomas, and chronic	of mucosal immunity. Highly
	hyperproliferative diseases.	preferred indications include
	Assays for immunomodulatory	blood disorders (e.g., as
	and differentiation factor	described below under
	proteins produced by a large	"Immune Activity", "Blood-
	variety of cells where the	Related Disorders", and/or
	expression level is strongly	"Cardiovascular Disorders"),
	regulated by cytokines, growth	and infection (e.g., as
	factors, and hormones are well	described below under
	known in the art and may be	"Infectious Disease"). Highly
	used or routinely modified to	preferred indications include
	assess the ability of	autoimmune diseases (e.g.,
	polypeptides of the invention	rheumatoid arthritis, systemic
	(including antibodies and	lupus erythematosis, multiple
	agonists or antagonists of the	sclerosis and/or as described
	invention) to mediate	below) and
	immunomodulation and	immunodeficiencies (e.g., as
	differentiation and modulate T	described below). Highly
	cell proliferation and function.	preferred indications also
	Exemplary assays that test for	include boosting a B cell-
	immunomodulatory proteins	mediated immune response
	evaluate the production of	and alternatively suppressing a
	cytokines, such as IL-6, and	B cell-mediated immune
	the stimulation and	response. Highly preferred
	upregulation of T cell	indications include
	proliferation and functional	inflammation and
	activities. Such assays that	inflammatory

	may be used or routinely	disorders.Additional highly
	modified to test	preferred indications include
	immunomodulatory and	asthma and allergy. Highly
-	diffferentiation activity of	preferred indications include
	polypeptides of the invention	neoplastic diseases (e.g.,
	(including antibodies and	myeloma, plasmacytoma,
	agonists or antagonists of the	leukemia, lymphoma,
	invention) include assays	melanoma, and/or as described
_	disclosed in Miraglia et al., J	below under
	Biomolecular Screening 4:193-	"Hyperproliferative
	204(1999); Rowland et al.,	Disorders"). Highly preferred
	"Lymphocytes: a practical	indications include neoplasms
	approach" Chapter 6:138-160	and cancers, such as, myeloma,
	(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
	Immunol 158:2919-2925	lymphoma, melanoma, and
	(1997), the contents of each of	prostate, breast, lung, colon,
	which are herein incorporated	pancreatic, esophageal,
	by reference in its entirety.	stomach, brain, liver and
	Human dendritic cells that may	urinary cancer. Other preferred
	be used according to these	indications include benign
	assays may be isolated using	dysproliferative disorders and
	techniques disclosed herein or	pre-neoplastic conditions, such
	otherwise known in the art.	as, for example, hyperplasia,
	Human dendritic cells are	metaplasia, and/or dysplasia.
	antigen presenting cells in	Preferred indications include
	suspension culture, which,	anemia, pancytopenia,
	when activated by antigen	leukopenia, thrombocytopenia,
	and/or cytokines, initiate and	Hodgkin's disease, acute
	upregulate T cell proliferation	lymphocytic anemia (ALL),
	and functional activities.	multiple myeloma, Burkitt's
		lymphoma, arthritis, AIDS,

granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additonal preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").		A highly preferred embodiment of the invention includes a method for inhibiting (e.g., decreasing)  TNF alpha production. An alternative highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing)  TNF alpha production. Highly preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-
		TNFa FMAT. Assays for immunomodulatory proteins produced by activated macrophages, T cells, fibroblasts, smooth muscle, and other cell types that exert a wide variety of inflammatory and cytotoxic effects on a variety of cells are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or
	IgG in Human B cells SAC	Production of TNF alpha by dendritic cells
	1425	1426
	HSAUK57	HSAUL82
	477	478

	antagonists of the invention) to	invention) to	Related Disorders", and/or
	mediate immunomodulation,	nodulation,	"Cardiovascular Disorders"),
	modulate inflammation and	ation and	Highly preferred indications
	cytotoxicity. Exemplary	nplary	include autoimmune diseases
	assays that test for		(e.g., rheumatoid arthritis,
	immunomodulatory proteins	y proteins	systemic lupus erythematosis,
	evaluate the production of	ction of	Crohn"s disease, multiple
	cytokines such as tumor	tumor	sclerosis and/or as described
	necrosis factor alpha (TNFa),	ha (TNFa),	below), immunodeficiencies
	and the induction or inhibition	or inhibition	(e.g., as described below),
	of an inflammatory or	y or	boosting a T cell-mediated
	cytotoxic response. Such	Such	immune response, and
	assays that may be used or	s used or	suppressing a T cell-mediated
	routinely modified to test	l to test	immune response. Additional
	immunomodulatory activity of	y activity of	highly preferred indications
	polypeptides of the invention	e invention	include inflammation and
	(including antibodies and	ies and	inflammatory disorders, and
-	agonists or antagonists of the	nists of the	treating joint damage in
	invention) include assays	assays	patients with rheumatoid
	disclosed in Miraglia et al., J	lia et al., J	arthritis. An additional highly
	Biomolecular Screening 4:193-	sening 4:193-	preferred indication is sepsis.
	204(1999); Rowland et al.,	nd et al.,	Highly preferred indications
	"Lymphocytes: a practical	oractical	include neoplastic diseases
	approach" Chapter 6:138-160	r 6:138-160	(e.g., leukemia, lymphoma,
	(2000); Verhasselt et al., Eur J	t et al., Eur J	and/or as described below
	Immunol 28(11):3886-3890	886-3890	under "Hyperproliferative
	(1198); Dahlen et al., J	al., J	Disorders"). Additionally,
	Immunol 160(7):3585-3593	585-3593	highly preferred indications
	(1998); Verhasselt et al., J	et al., J	include neoplasms and
	Immunol 158:2919-2925	9-2925	cancers, such as, leukemia,
	(1997); and Nardelli et al., J	lli et al., J	lymphoma, melanoma, glioma

					is infection (e.g., an infectious disease as described below under "Infectious Disease").
478	HSAUL82	1426	Activation of transcription	This reporter assay measures activation of the NFkB	Highly preferred indication includes allergy, asthma, and rhinitis. Additional biobly
			response element in	human basophil cell line.	preferred indications include
			immune cells (such as basonbils)	Assays for the activation of transcription through the	infection (e.g., an infectious disease as described below
			as casofams).	NFKB response element are	under "Infectious Disease"),
				well-known in the art and may	and inflammation and
				be used or routinely modified to assess the ability of	inflammatory disorders. Preferred indications include
				polypeptides of the invention	immunological and
				(including antibodies and	hempatopoietic disorders (e.g.,
				agonists or antagonists of the	as described below under
_				invention) to regulate NFKB	"Immune Activity", and
				transcription factors and	"Blood-Related Disorders").
				modulate expression of	Preferred indications also
_				immunomodulatory genes.	include autoimmune diseases
				Exemplary assays for	(e.g., rheumatoid arthritis,
				transcription through the	systemic lupus erythematosis,
				NFKB response element that	multiple sclerosis and/or as
				may be used or rountinely	described below) and
				modified to test NFKB-	immunodeficiencies (e.g., as
_				response element activity of	described below). Preferred
				polypeptides of the invention	indications also include
				(including antibodies and	neoplastic diseases (e.g.,
_				agonists or antagonists of the	leukemia, lymphoma,
				invention) include assays	melanoma, and/or as described
				disclosed in Berger et al., Gene	below under

				66:1-10 (1998); Cullen and	"Hyperproliferative
				Malm, Methods in Enzymol 216:362-368 (1992); Henthorn	Disorders ). Preferred indications include neoplasms
				et al., Proc Natl Acad Sci USA	and cancer, such as, for
				85:6342-6346 (1988); Marone	example, leukemia, lymphoma,
				et al, Int Arch Allergy	melanoma, and prostate,
				Immunol 114(3):207-17	breast, lung, colon, pancreatic,
				(1997), the contents of each of	esophageal, stomach, brain,
				which are herein incorporated	liver, urinary tract cancers and
				by reference in its entirety.	as described below under
				Basophils that may be used	"Hyperproliferative
				according to these assays are	Disorders".
				publicly available (e.g.,	
				through the ATCC).	
				Exemplary human basophil	
				cell lines that may be used	
				according to these assays	
				include Ku812, originally	
				established from a patient with	
				chronic myelogenous	
				leukemia. It is an immature	
				prebasophilic cell line that can	
				be induced to differentiate into	
		!		mature basophils.	
	HSAVH65	1427	Activation of T-	Kinase assay. JNK and p38	Preferred indications include
479			Cell p38 or JNK	kinase assays for signal	neoplastic diseases (e.g., as
			Signaling Pathway.	transduction that regulate cell	described below under
				proliferation, activation, or	"Hyperproliferative
				apoptosis are well known in	Disorders"), blood disorders
				the art and may be used or	(e.g., as described below under
				routinely modified to assess	"Immune Activity",

the ability of polypeptides of	"Cardiovascular Disorders",
the invention (including	and/or "Blood-Related
 antibodies and agonists or	Disorders"), and infection
antagonists of the invention) to	(e.g., an infectious disease as
promote or inhibit immune cell	described below under
(e.g. T-cell) proliferation,	"Infectious Disease"). Highly
activation, and apoptosis.	preferred indications include
Exemplary assays for JNK and	autoimmune diseases (e.g.,
p38 kinase activity that may be	rheumatoid arthritis, systemic
used or routinely modified to	lupus erythematosis, multiple
test JNK and p38 kinase-	sclerosis and/or as described
induced activity of	below) and
polypeptides of the invention	immunodeficiencies (e.g., as
(including antibodies and	described below). Additional
agonists or antagonists of the	highly preferred indications
invention) include the assays	include inflammation and
disclosed in Forrer et al., Biol	inflammatory disorders.
Chem 379(8-9):1101-1110	Highly preferred indications
(1998); Gupta et al., Exp Cell	also include neoplastic
Res 247(2): 495-504 (1999);	diseases (e.g., leukemia,
Kyriakis JM, Biochem Soc	lymphoma, and/or as described
Symp 64:29-48 (1999); Chang	below under
and Karin, Nature	"Hyperproliferative
410(6824):37-40 (2001); and	Disorders"). Highly preferred
Cobb MH, Prog Biophys Mol	indications include neoplasms
Biol 71(3-4):479-500 (1999);	and cancers, such as, leukemia,
the contents of each of which	lymphoma, prostate, breast,
 are herein incorporated by	lung, colon, pancreatic,
reference in its entirety. T	esophageal, stomach, brain,
cells that may be used	liver, and urinary cancer. Other
according to these assays are	preferred indications include

				publicly available (e.g., through the ATCC). Exemplary mouse T cells that may be used according to these assays include the CTLL cell line, which is an IL-2 dependent suspension-culture cell line with cytotoxic activity.	benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia. Preferred indications include arthritis, asthma, AIDS, allergy, anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphoma, granulomatous disease, inflammatory bowel disease, sepsis, psoriasis, suppression of immune reactions to transplanted organs and tissues, endocarditis, meningitis, and Lyme Disease.
479	HSAVH65	1427	ICAM in Normal Human Bronchial Epitheliae		
479	HSAVH65	1427	IL-8 in Normal Human Bronchial Epitheliae		
480	HSAVK10	1428	Activation of transcription through AP1 response element in immune cells (such	Assays for the activation of transcription through the AP1 response element are known in the art and may be used or routinely modified to assess	Preferred indications include neoplastic diseases (e.g., as described below under "Hyperproliferative Disorders"), blood disorders

	as T-cells).	the ability of polypeptides of	(e.g., as described below under
		the invention (including	"Immune Activity",
		antibodies and agonists or	"Cardiovascular Disorders",
		antagonists of the invention) to	and/or "Blood-Related
		modulate growth and other cell	Disorders"), and infection
		functions. Exemplary assays	(e.g., an infectious disease as
		for transcription through the	described below under
		AP1 response element that	"Infectious Disease"). Highly
		may be used or routinely	preferred indications include
		modified to test AP1-response	autoimmune diseases (e.g.,
_		element activity of	rheumatoid arthritis, systemic
		polypeptides of the invention	lupus erythematosis, multiple
		(including antibodies and	sclerosis and/or as described
		agonists or antagonists of the	below) and
		invention) include assays	immunodeficiencies (e.g., as
		disclosed in Berger et al., Gene	described below). Additional
		66:1-10 (1988); Cullen and	highly preferred indications
		Malm, Methods in Enzymol	include inflammation and
		216:362-368 (1992); Henthorn	inflammatory disorders.
		et al., Proc Natl Acad Sci USA	Highly preferred indications
		85:6342-6346 (1988);	also include neoplastic
		Rellahan et al., J Biol Chem	diseases (e.g., leukemia,
		272(49):30806-30811 (1997);	lymphoma, and/or as described
		Chang et al., Mol Cell Biol	below under
		18(9):4986-4993 (1998); and	"Hyperproliferative
		Fraser et al., Eur J Immunol	Disorders"). Highly preferred
		29(3):838-844 (1999), the	indications include neoplasms
		contents of each of which are	and cancers, such as, leukemia,
		herein incorporated by	lymphoma, prostate, breast,
		reference in its entirety. T	lung, colon, pancreatic,
		cells that may be used	esophageal, stomach, brain,

				according to these assays are	liver, and urinary cancer. Other
				publicly available (e.g.,	preferred indications include
				through the ATCC).	benign dysproliferative
				Exemplary mouse T cells that	disorders and pre-neoplastic
				may be used according to these	conditions, such as, for
	-			assays include the CTLL cell	example, hyperplasia,
				line, which is an IL-2	metaplasia, and/or dysplasia.
				dependent suspension-culture	Preferred indications include
				cell line with cytotoxic	arthritis, asthma, AIDS,
				activity.	allergy, anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					granulomatous disease,
					inflammatory bowel disease,
	·				sepsis, psoriasis, suppression
					of immune reactions to
					transplanted organs and
					tissues, endocarditis,
					meningitis, and Lyme Disease.
	HSAVK10	1428	Activation of	Assays for the activation of	Preferred indications include
480			transcription	transcription through the	blood disorders (e.g., as
			through cAMP	cAMP response element are	described below under
			response element in	well-known in the art and may	"Immune Activity", "Blood-
			immune cells (such	be used or routinely modified	Related Disorders", and/or
			as T-cells).	to assess the ability of	"Cardiovascular Disorders"),
				polypeptides of the invention	and infection (e.g., an
				(including antibodies and	infectious disease as described
				agonists or antagonists of the	below under "Infectious

inventio	invention) to increase cAMP	Disease"). Preferred
and regu	and regulate CREB	indications include
transcrif	transcription factors, and	autoimmune diseases (e.g.,
modulat modulat	modulate expression of genes	rheumatoid arthritis, systemic
involved	involved in a wide variety of	lupus erythematosis, multiple
cell fund	cell functions. Exemplary	sclerosis and/or as described
assays f	assays for transcription	below), immunodeficiencies
through	through the cAMP response	(e.g., as described below),
element	element that may be used or	boosting a T cell-mediated
routinel	routinely modified to test	immune response, and
cAMP-r	cAMP-response element	suppressing a T cell-mediated
activity	activity of polypeptides of the	immune response. Additional
inventio	invention (including antibodies	preferred indications include
and ago	and agonists or antagonists of	inflammation and
the inve	the invention) include assays	inflammatory disorders.
disclose	disclosed in Berger et al., Gene	Highly preferred indications
66:1-10	66:1-10 (1998); Cullen and	include neoplastic diseases
Malm, N	Malm, Methods in Enzymol	(e.g., leukemia, lymphoma,
216:362	216:362-368 (1992); Henthorn	and/or as described below
et al., Pr	et al., Proc Natl Acad Sci USA	under "Hyperproliferative
85:6342	85:6342-6346 (1988); Black et	Disorders"). Highly preferred
al., Viru	al., Virus Genes 15(2):105-117	indications include neoplasms
(1997);	(1997); and Belkowski et al., J	and cancers, such as, for
Immunc	Immunol 161(2):659-665	example, leukemia, lymphoma
(1998),	(1998), the contents of each of	(e.g., T cell lymphoma,
which a	which are herein incorporated	Burkitt's lymphoma, non-
by refer	by reference in its entirety. T	Hodgkins lymphoma,
cells tha	cells that may be used	Hodgkin"s disease),
accordir	according to these assays are	melanoma, and prostate,
publicly	publicly available (e.g.,	breast, lung, colon, pancreatic,
through	through the ATCC).	esophageal, stomach, brain,

				Exemplary mouse T cells that	liver and urinary cancer. Other
				may be used according to these assays include the CTLL cell	preferred indications include benign dysproliferative
				line, which is a suspension	disorders and pre-neoplastic
				culture of IL-2 dependent	conditions, such as, for
				cytotoxic T cells.	example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					acute lymphocytic anemia
					(ALL), plasmacytomas,
					multiple myeloma, arthritis,
					AIDS, granulomatous disease,
					inflammatory bowel disease,
					sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease, and
					asthma and allergy.
	HSAVK10	1428	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
480				by T cells and has strong	embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced	stimulating (e.g., increasing)
				IgE production and increases	IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a

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		IL-0 induces cytotoxic 1 cells.	incurod for inmolating (c.g.,
		Deregulated expression of IL-6	reducing) IL-6 production. A
		has been linked to autoimmune	highly preferred indication is
		disease, plasmacytomas,	the stimulation or enhancement
		myelomas, and chronic	of mucosal immunity. Highly
		hyperproliferative diseases.	preferred indications include
		Assays for immunomodulatory	blood disorders (e.g., as
-		and differentiation factor	described below under
		proteins produced by a large	"Immune Activity", "Blood-
		variety of cells where the	Related Disorders", and/or
		expression level is strongly	"Cardiovascular Disorders"),
		regulated by cytokines, growth	and infection (e.g., as
		factors, and hormones are well	described below under
		known in the art and may be	"Infectious Disease"). Highly
		used or routinely modified to	preferred indications include
		assess the ability of	autoimmune diseases (e.g.,
		polypeptides of the invention	rheumatoid arthritis, systemic
	_	(including antibodies and	lupus erythematosis, multiple
		agonists or antagonists of the	sclerosis and/or as described
		invention) to mediate	below) and
		immunomodulation and	immunodeficiencies (e.g., as
		differentiation and modulate T	described below). Highly
		cell proliferation and function.	preferred indications also
		Exemplary assays that test for	include boosting a B cell-
		immunomodulatory proteins	mediated immune response
		evaluate the production of	and alternatively suppressing a
		cytokines, such as IL-6, and	B cell-mediated immune
		the stimulation and	response. Highly preferred
		upregulation of T cell	indications include
		proliferation and functional	inflammation and
		activities. Such assays that	inflammatory

	may be used or routinely modified to test immunomodulatory and diffferentiation activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Miraglia et al., J Biomolecular Screening 4:193-204(1999); Rowland et al., "Lymphocytes: a practical approach" Chapter 6:138-160 (2000); and Verhasselt et al., J Immunol 158:2919-2925 (1997), the contents of each of which are herein incorporated by reference in its entirety. Human dendritic cells that may be used according to these assays may be isolated using techniques disclosed herein or otherwise known in the art.	disorders. Additional highly preferred indications include asthma and allergy. Highly preferred indications include neoplastic diseases (e.g., myeloma, plasmacytoma, lumphoma, melanoma, and/or as described below under "Hyperproliferative Disorders"). Highly preferred indications include neoplasms and cancers, such as, myeloma, plasmacytoma, leukemia, lymphoma, melanoma, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia,
	Human dendritic cells are antigen presenting cells in suspension culture, which, when activated by antigen and/or cytokines, initiate and upregulate T cell proliferation and functional activities.	as, for example, hyperplasta, metaplasia, and/or dysplasia. Preferred indications include anemia, pancytopenia, leukopenia, thrombocytopenia, Hodgkin's disease, acute lymphocytic anemia (ALL), multiple myeloma, Burkitt's lymphoma, arthritis, AIDS,

		,			granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additonal preferred indication is infectiou (e.g., an infectious disease as described below under "Infectious
480	HSAVK10	1428	Production of MIP1alpha	MIP-1alpha FMAT. Assays for immunomodulatory proteins produced by activated dendritic cells that upregulate monocyte/macrophage and T cell chemotaxis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate imvention) to mediate chemotaxis, and modulate T cell differentiation. Exemplary	A highly preferred embodiment of the invention includes a method for stimulating MIP1a production. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) MIP1a production. A highly preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease"). Preferred indications include blood disorders (e.g., as described below under

assays that test for	"Immune Activity", "Blood-
immunomodulatory proteins	Related Disorders", and/or
evaluate the production of	"Cardiovascular Disorders").
chemokines, such as	Highly preferred indications
macrophage inflammatory	include autoimmune diseases
protein 1 alpha (MIP-1a), and	(e.g., rheumatoid arthritis,
 the activation of	systemic lupus erythematosis,
monocytes/macrophages and T	multiple sclerosis and/or as
cells. Such assays that may be	described below) and
used or routinely modified to	immunodeficiencies (e.g., as
test immunomodulatory and	described below). Additional
chemotaxis activity of	highly preferred indications
polypeptides of the invention	include inflammation and
(including antibodies and	inflammatory disorders.
 agonists or antagonists of the	Preferred indications also
invention) include assays	include anemia, pancytopenia,
disclosed in Miraglia et al., J	leukopenia, thrombocytopenia,
Biomolecular Screening 4:193-	Hodgkin's disease, acute
204(1999); Rowland et al.,	lymphocytic anemia (ALL),
 "Lymphocytes: a practical	plasmacytomas, multiple
approach" Chapter 6:138-160	myeloma, Burkitt's lymphoma,
(2000); Satthaporn and	arthritis, AIDS, granulomatous
Eremin, J R Coll Surg Ednb	disease, inflammatory bowel
45(1):9-19 (2001); Drakes et	disease, sepsis, neutropenia,
al., Transp Immunol 8(1):17-	neutrophilia, psoriasis,
29 (2000); Verhasselt et al., J	suppression of immune
Immunol 158:2919-2925	reactions to transplanted
(1997); and Nardelli et al., J	organs and tissues, hemophilia,
Leukoc Biol 65:822-828	hypercoagulation, diabetes
(1999), the contents of each of	mellitus, endocarditis,
which are herein incorporated	meningitis, Lyme Disease,

				by reference in its entirety.  Human dendritic cells that may be used according to these assays may be isolated using techniques disclosed herein or otherwise known in the art.  Human dendritic cells are antigen presenting cells in suspension culture, which, when activated by antigen and/or cytokines, initiate and upregulate T cell proliferation and functional activities.	asthma, and allergy. Preferred indications also include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Highly preferred indications include neoplasms and cancers, such as, leukemia, lymphoma, prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metanlasia. and/or dysplasia.
480	HSAVK10	1428	SEAP in Senescence Assay		
481	HSAWD74	1429	Regulation of transcription via DMEF1 response element in adipocytes and preadipocytes	Assays for the regulation of transcription through the DMEF1 response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to activate the	A highly preferred indication is diabetes mellitus. Additional highly preferred indications include complications associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other

	DMEF1 response element in a	diseases and disorders as
	reporter construct (such as that	described in the "Renal
-	containing the GLUT4	Disorders" section below),
	promoter) and to regulate	diabetic neuropathy, nerve
	insulin production. The	disease and nerve damage
	DMEF1 response element is	(e.g., due to diabetic
	present in the GLUT4	neuropathy), blood vessel
	promoter and binds to MEF2	blockage, heart disease, stroke,
	transcription factor and another	impotence (e.g., due to diabetic
	transcription factor that is	neuropathy or blood vessel
	required for insulin regulation	blockage), seizures, mental
	of Glut4 expression in skeletal	confusion, drowsiness,
	muscle. GLUT4 is the primary	nonketotic hyperglycemic-
	insulin-responsive glucose	hyperosmolar coma,
	transporter in fat and muscle	cardiovascular disease (e.g.,
	tissue. Exemplary assays that	heart disease, atherosclerosis,
	may be used or routinely	microvascular disease,
	modified to test for DMEF1	hypertension, stroke, and other
	response element activity (in	diseases and disorders as
	adipocytes and pre-adipocytes)	described in the
	by polypeptides of the	"Cardiovascular Disorders"
	invention (including antibodies	section below), dyslipidemia,
	and agonists or antagonists of	endocrine disorders (as
	the invention) include assays	described in the "Endocrine
	disclosed in Thai, M.V., et al., J	Disorders" section below),
	Biol Chem, 273(23):14285-92	neuropathy, vision impairment
	(1998); Mora, S., et al., J Biol	(e.g., diabetic retinopathy and
	Chem, 275(21):16323-8	blindness), ulcers and impaired
	(2000); Liu, M.L., et al., J Biol	wound healing, and infection
	Chem, 269(45):28514-21	(e.g., infectious diseases and
	(1994); "Identification of a 30-	disorders as described in the

				culture conditions.	
	HSAWD74	1429	Activation of	This reporter assay measures	Highly preferred indications
481			transcription	activation of the NFAT	include allergy, asthma, and
			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
	=		as mast cells).	cells has been linked to	described below under
	ž			cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the Nuclear Factor of	Preferred indications also
				Activated T cells (NFAT)	include blood disorders (e.g.,
				response element are well-	as described below under
				known in the art and may be	"Immune Activity", "Blood-
_				used or routinely modified to	Related Disorders", and/or
				assess the ability of	"Cardiovascular Disorders").
				polypeptides of the invention	Preferred indications include
				(including antibodies and	autoimmune diseases (e.g.,
				agonists or antagonists of the	rheumatoid arthritis, systemic
				invention) to regulate NFAT	lupus erythematosis, multiple
				transcription factors and	sclerosis and/or as described
				modulate expression of genes	below) and
				involved in	immunodeficiencies (e.g., as
				immunomodulatory functions.	described below). Preferred
				Exemplary assays for	indications include neoplastic
				transcription through the	diseases (e.g., leukemia,
				NFAT response element that	lymphoma, melanoma,
				may be used or routinely	prostate, breast, lung, colon,
				modified to test NFAT-	pancreatic, esophageal,
				response element activity of	stomach, brain, liver, and
				polypeptides of the invention	urinary tract cancers and/or as

		-
	(including antibodies and	described below under
	agonists or antagonists of the	"Hyperproliferative
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	indications include benign
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
-	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	Preferred indications include
	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia
	Hutchinson and McCloskey, J	(ALL), plasmacytomas,
	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
	16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
	al., J Exp Med 188:527-537	granulomatous disease,
	(1998), the contents of each of	inflammatory bowel disease,
	which are herein incorporated	sepsis, neutropenia,
	by reference in its entirety.	neutrophilia, psoriasis,
	Mast cells that may be used	suppression of immune
	according to these assays are	reactions to transplanted
	publicly available (e.g.,	organs and tissues, hemophilia,
	through the ATCC).	hypercoagulation, diabetes
	Exemplary human mast cells	mellitus, endocarditis,
	that may be used according to	meningitis, and Lyme Disease.
	these assays include the HMC-	
	1 cell line, which is an	
	immature human mast cell line	
	established from the peripheral	
	blood of a patient with mast	!

						lin						to							-	of	on					). It		pa	- SI	
cell leukemia, and exhibits	many characteristics of	immature mast cells.	Assays for the regulation (i.e.	increases or decreases) of	viability and proliferation of	cells in vitro are well-known in	the art and may be used or	routinely modified to assess	the ability of polypeptides of	the invention (including	antibodies and agonists or	antagonists of the invention) to	regulate viability and	proliferation of pre-adipose	cells and cell lines. For	example, the CellTiter-Gloô	Luminescent Cell Viability	Assay (Promega Corp.,	Madison, WI, USA) can be	used to measure the number of	viable cells in culture based on	quantitation of the ATP	present which signals the	presence of metabolically	active cells. 3T3-L1 is a	mouse preadipocyte cell line. It	is a continuous substrain of	3T3 fibroblast cells developed	through clonal isolation. Cells	were differentiated to an
			Proliferation of pre-	adipose cells (such	as 3T3-L1 cells)								_										-							
			1429																											
			HSAWD74																											
				481																										

				adipose-like state before being	
				used in the screen. See Green H and Meuth M., Cell 3: 127-	
				133 (1974), which is herein	
				incorporated by reference in its	
				entirety.	
482	HSAWZ41	1430	SEAP in 293/ISRE		
	HSAWZ41	1430	Activation of	Assays for the activation of	A highly preferred indication
482			transcription	transcription through the	is obesity and/or complications
			through cAMP	cAMP response element are	associated with obesity.
			response element	well-known in the art and may	Additional highly preferred
			(CRE) in pre-	be used or routinely modified	indications include weight loss
			adipocytes.	to assess the ability of	or alternatively, weight gain.
				polypeptides of the invention	An additional highly preferred
				(including antibodies and	indication is diabetes mellitus.
			-	agonists or antagonists of the	An additional highly preferred
				invention) to increase cAMP,	indication is a complication
				regulate CREB transcription	associated with diabetes (e.g.,
				factors, and modulate	diabetic retinopathy, diabetic
				expression of genes involved	nephropathy, kidney disease
				in a wide variety of cell	(e.g., renal failure,
				functions. For example, a	nephropathy and/or other
				3T3-L1/CRE reporter assay	diseases and disorders as
				may be used to identify factors	described in the "Renal
				that activate the cAMP	Disorders" section below),
				signaling pathway. CREB	diabetic neuropathy, nerve
				plays a major role in	disease and nerve damage
				adipogenesis, and is involved	(e.g., due to diabetic
				in differentiation into	neuropathy), blood vessel
				adipocytes. CRE contains the	blockage, heart disease, stroke,

binding sequence for the	impotence (e.g., due to diabetic
transcription factor CREB	neuropathy or blood vessel
(CRE binding protein).	blockage), seizures, mental
Exemplary assays for	confusion, drowsiness,
transcription through the	nonketotic hyperglycemic-
cAMP response element that	hyperosmolar coma,
may be used or routinely	cardiovascular disease (e.g.,
modified to test cAMP-	heart disease, atherosclerosis,
response element activity of	microvascular disease,
polypeptides of the invention	hypertension, stroke, and other
(including antibodies and	diseases and disorders as
agonists or antagonists of the	described in the
invention) include assays	"Cardiovascular Disorders"
disclosed in Berger et al., Gene	section below), dyslipidemia,
66:1-10 (1998); Cullen and	endocrine disorders (as
Malm, Methods in Enzymol	described in the "Endocrine
216:362-368 (1992); Henthorn	Disorders" section below),
et al., Proc Natl Acad Sci USA	neuropathy, vision impairment
85:6342-6346 (1988); Reusch	(e.g., diabetic retinopathy and
et al., Mol Cell Biol	blindness), ulcers and impaired
20(3):1008-1020 (2000); and	wound healing, and infection
Klemm et al., J Biol Chem	(e.g., infectious diseases and
273:917-923 (1998), the	disorders as described in the
contents of each of which are	"Infectious Diseases" section
herein incorporated by	below, especially of the
reference in its entirety. Pre-	urinary tract and skin), carpal
adipocytes that may be used	tunnel syndrome and
according to these assays are	Dupuytren's contracture).
publicly available (e.g.,	Additional highly preferred
through the ATCC) and/or	indications are complications
may be routinely generated.	associated with insulin

				Exemplary mouse adipocyte	resistance.
				according to these assays	
				include 3T3-L1 cells. 3T3-L1	
				is an adherent mouse	
				preadipocyte cell line that is a	
				continuous substrain of 3T3	
				fibroblast cells developed	
				through clonal isolation and	
				undergo a pre-adipocyte to	
				adipose-like conversion under	
				appropriate differentiation	
				conditions known in the art.	
	HSAWZ41	1430	Activation of	Assays for the activation of	Preferred indications
			transcription	transcription through the AP1	include neoplastic diseases
			through AP1	response element are known in	(e.g., as described below under
			response element in	the art and may be used or	"Hyperproliferative
			immune cells (such	routinely modified to assess	Disorders"), blood disorders
			as T-cells).	the ability of polypeptides of	(e.g., as described below under
				the invention (including	"Immune Activity",
				antibodies and agonists or	"Cardiovascular Disorders",
				antagonists of the invention) to	and/or "Blood-Related
				modulate growth and other cell	Disorders"), and infection
				functions. Exemplary assays	(e.g., an infectious disease as
				for transcription through the	described below under
				AP1 response element that	"Infectious Disease"). Highly
				may be used or routinely	preferred indications include
				modified to test AP1-response	autoimmune diseases (e.g.,
				element activity of	rheumatoid arthritis, systemic
				polypeptides of the invention	lupus erythematosis, multiple
,				(including antibodies and	sclerosis and/or as described

agonists	agonists or antagonists of the	below) and
invention	invention) include assays	immunodeficiencies (e.g., as
disclosed	disclosed in Berger et al., Gene	described below). Additional
66:1-10		highly preferred indications
Malm, M	Malm, Methods in Enzymol	include inflammation and
216:362-	216:362-368 (1992); Henthorn	inflammatory disorders.
et al., Pro	et al., Proc Natl Acad Sci USA	Highly preferred indications
85:6342-	85:6342-6346 (1988);	also include neoplastic
Rellahan	Rellahan et al., J Biol Chem	diseases (e.g., leukemia,
272(49):	·;	lymphoma, and/or as described
Chang et	Chang et al., Mol Cell Biol	below under
18(9):49	- pı	"Hyperproliferative
Fraser et	Fraser et al., Eur J Immunol	Disorders"). Highly preferred
29(3):83	29(3):838-844 (1999), the	indications include neoplasms
contents	contents of each of which are	and cancers, such as, leukemia,
herein in	herein incorporated by	lymphoma, prostate, breast,
reference	reference in its entirety. T	lung, colon, pancreatic,
cells that	cells that may be used	esophageal, stomach, brain,
accordin	s are	liver, and urinary cancer. Other
publicly		preferred indications include
through		benign dysproliferative
Exempla	Exemplary mouse T cells that	disorders and pre-neoplastic
may be u	Se_	conditions, such as, for
assays in	Tr cell	example, hyperplasia,
line, whi	line, which is an IL-2	metaplasia, and/or dysplasia.
lapuadap   debender	dependent suspension-culture	Preferred indications include
cell line	cell line with cytotoxic	arthritis, asthma, AIDS,
activity.		allergy, anemia, pancytopenia,
		leukopenia, thrombocytopenia,
		Hodgkin's disease, acute
		lymphocytic anemia (ALL),

					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, psoriasis, suppression
			-		of immune reactions to
					transplanted organs and
					tissues, endocarditis,
					meningitis, and Lyme Disease.
	HSAWZ41	1430	Activation of	Assays for the activation of	Highly preferred indications
482			transcription	transcription through the	include asthma, allergy,
			through NFKB	NFKB response element are	hypersensitivity reactions, and
			response element in	well-known in the art and may	inflammation. Preferred
			immune cells (such	be used or routinely modified	indications include infection
			as EOL1 cells).	to assess the ability of	(e.g., an infectious disease as
				polypeptides of the invention	described below under
				(including antibodies and	"Infectious Disease"),
				agonists or antagonists of the	immunological disorders,
				invention) to regulate NFKB	inflammation and
				transcription factors and	inflammatory disorders (e.g.,
				modulate expression of	as described below under
				immunomodulatory genes.	"Immune Activity", and
				Exemplary assays for	"Blood-Related Disorders").
				transcription through the	Preferred indications include
				NFKB response element that	autoimmune diseases (e.g.,
				may be used or rountinely	rheumatoid arthritis, systemic
				modified to test NFKB-	lupus erythematosis, multiple
				response element activity of	sclerosis and/or as described
				polypeptides of the invention	below) and
				(including antibodies and	immunodeficiencies (e.g., as
				agonists or antagonists of the	described below).

invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and	216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); Valle	Blazquez et al, Immunology 90(3):455-460 (1997); Aramburau et al., J Exp Med 82(3):801-810 (1995); and	Fraser et al., 29(3):838-844 (1999), the contents of each of which are herein incorporated	by reference in its entirety. For example, a reporter assay (which measures increases in	transcription inducible from a NFkB responsive element in EOL-1 cells) may link the	NFKB element to a repeorter gene and binds to the NFKB transcription factor, which is	other factors. Exemplary immune cells that may be used according to these assays	include eosinophils such as the human EOL-1 cell line of eosinophils. Eosinophils are a type of immune cell important

onse n the ss s of onl) to otion onse ponse
development. Exemplary Immunodeficiencies (e.g., as assays for transcription described below). Preferred

through the GATA3 response	indications include neoplastic
element that may be used or	diseases (e.g., leukemia,
routinely modified to test	lymphoma, melanoma,
GATA3-response element	prostate, breast, lung, colon,
 activity of polypeptides of the	pancreatic, esophageal,
invention (including antibodies	stomach, brain, liver, and
and agonists or antagonists of	urinary tract cancers and/or as
the invention) include assays	described below under
disclosed in Berger et al., Gene	"Hyperproliferative
66:1-10 (1998); Cullen and	Disorders"). Other preferred
Malm, Methods in Enzymol	indications include benign
216:362-368 (1992); Henthorn	dysproliferative disorders and
et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
 Quant Biol 64:563-571 (1999);	Preferred indications include
Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
contents of each of which are	lymphoma, arthritis, AIDS,
herein incorporated by	granulomatous disease,
reference in its entirety. Mast	inflammatory bowel disease,
cells that may be used	sepsis, neutropenia,
according to these assays are	neutrophilia, psoriasis,
publicly available (e.g.,	suppression of immune
through the ATCC).	reactions to transplanted
Exemplary human mast cells	organs and tissues, hemophilia,
that may be used according to	hypercoagulation, diabetes

				these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells	mellitus, endocarditis, meningitis, and Lyme Disease.
482	HSAWZ41	1430	Activation of transcription through NFAT response element in immune cells (such as mast cells).	This reporter assay measures activation of the NFAT signaling pathway in HMC-1 human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and modulate expression of genes	Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and inflammatory disorders. Preferred indications also include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and
				involved in immunomodulatory functions.	immunodeficiencies (e.g., as described below). Preferred

	Exemplary assays for	indications include neoplastic
	transcription through the	diseases (e.g., leukemia,
	NFAT response element that	lymphoma, melanoma,
	may be used or routinely	prostate, breast, lung, colon,
	modified to test NFAT-	pancreatic, esophageal,
	response element activity of	stomach, brain, liver, and
	polypeptides of the invention	urinary tract cancers and/or as
	(including antibodies and	described below under
	agonists or antagonists of the	"Hyperproliferative
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	indications include benign
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	Preferred indications include
	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
-	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia
	Hutchinson and McCloskey, J	(ALL), plasmacytomas,
	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
	16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
	al., J Exp Med 188:527-537	granulomatous disease,
	(1998), the contents of each of	inflammatory bowel disease,
	which are herein incorporated	sepsis, neutropenia,
	by reference in its entirety.	neutrophilia, psoriasis,
	Mast cells that may be used	suppression of immune
	according to these assays are	reactions to transplanted
	publicly available (e.g.,	organs and tissues, hemophilia,
	through the ATCC).	hypercoagulation, diabetes

				Exemplary human mast cells that may be used according to these assays include the HMC.	mellitus, endocarditis, meningitis, and Lyme Disease.
				1 cell line, which is an	
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HSAWZ41	1430	Activation of	Assays for the activation of	A preferred embodiment of
482			transcription	transcription through the	the invention includes a
			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha
			immune cells (such	art and may be used or	production. An alternative
			as natural killer	routinely modified to assess	highly preferred embodiment
			cells).	the ability of polypeptides of	of the invention includes a
				the invention (including	method for stimulating (e.g.,
				antibodies and agonists or	increasing) TNF alpha
				antagonists of the invention) to	production. Preferred
				regulate serum response	indications include blood
				factors and modulate the	disorders (e.g., as described
				expression of genes involved	below under "Immune
				in growth and upregulate the	Activity", "Blood-Related
				function of growth-related	Disorders", and/or
				genes in many cell types.	"Cardiovascular Disorders"),
				Exemplary assays for	Highly preferred indications
				transcription through the SRE	include autoimmune diseases
				that may be used or routinely	(e.g., rheumatoid arthritis,
				modified to test SRE activity	systemic lupus erythematosis,
				of the polypeptides of the	Crohn"s disease, multiple

sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated immune response, and	suppressing a T cell-mediated immune response. Additional highly preferred indications include inflammation and inflammatory disorders, and treating joint damage in	patients with rheumatoid arthritis. An additional highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Additionally, highly preferred indications include neoplasms and	cancers, such as, for example, leukemia, lymphoma, melanoma, glioma (e.g., malignant glioma), solid tumors, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include
invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and	Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); Benson et al., J Immunol 153(9):3862-3873 (1994); and Black et al.,	Virus Genes 12(2):105-117 (1997), the content of each of which are herein incorporated by reference in its entirety. T cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary T cells that may be used according to these assays include the NK-YT cell line.	which is a human natural killer cell line with cytolytic and cytotoxic activity.

					benign dysproliferative
		-			disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
		-			anemia, pancytopenia,
_					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues, hemophilia,
					hypercoagulation, diabetes
					mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
482	HSAWZ41	1430	SEAP in OE-21		
	HSAWZ41	1430	Activation of	Assays for the activation of	Highly preferred indications

482	transcription	transcription through the	include neoplastic diseases
	through GAS	Gamma Interferon Activation	(e.g., leukemia, lymphoma,
	response element in	Site (GAS) response element	and/or as described below
	immune cells (such	are well-known in the art and	under "Hyperproliferative
	as T-cells).	may be used or routinely	Disorders"). Highly preferred
		modified to assess the ability	indications include neoplasms
		of polypeptides of the	and cancers, such as, for
		invention (including antibodies	example, leukemia, lymphoma
		and agonists or antagonists of	(e.g., T cell lymphoma,
		the invention) to regulate	Burkitt's lymphoma, non-
		STAT transcription factors and	Hodgkins lymphoma,
		modulate gene expression	Hodgkin"s disease),
		involved in a wide variety of	melanoma, and prostate,
		cell functions. Exemplary	breast, lung, colon, pancreatic,
		assays for transcription	esophageal, stomach, brain,
		through the GAS response	liver and urinary cancer. Other
		element that may be used or	preferred indications include
		routinely modified to test	benign dysproliferative
		GAS-response element activity	disorders and pre-neoplastic
		of polypeptides of the	conditions, such as, for
		invention (including antibodies	example, hyperplasia,
		and agonists or antagonists of	metaplasia, and/or dysplasia.
		the invention) include assays	Preferred indications include
		disclosed in Berger et al., Gene	autoimmune diseases (e.g.,
		66:1-10 (1998); Cullen and	rheumatoid arthritis, systemic
		Malm, Methods in Enzymol	lupus erythematosis, multiple
		216:362-368 (1992); Henthorn	sclerosis and/or as described
		et al., Proc Natl Acad Sci USA	below), immunodeficiencies
		85:6342-6346 (1988);	(e.g., as described below),
		Matikainen et al., Blood	boosting a T cell-mediated
		93(6):1980-1991 (1999); and	immune response, and

					neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, and asthma and allergy.
482	HSAWZ41	1430	Activation of transcription through STAT6 response element in immune cells (such as T-cells).	Assays for the activation of transcription through the Signal Transducers and Activators of Transcription (STAT6) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate STAT6 transcription factors and modulate the expression of multiple genes. Exemplary assays for transcription through the STAT6 response element that may be used or routinely modified to test STAT6 response element activity of the polypeptides of the invention (including	A highly preferred indication is allergy. Another highly preferred indication is asthma. Additional highly preferred indications include inflammation and inflammatory disorders. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below).
				antibodies and agonists or	Preferred indications include

	antagonists of the invention)	neoplastic diseases (e.g.,
 	include assays disclosed in	leukemia, lymphoma,
	Berger et al., Gene 66:1-10	melanoma, and/or as described
	(1998); Cullen and Malm,	below under
	Methods in Enzymol 216:362-	"Hyperproliferative
	368 (1992); Henthorn et al.,	Disorders"). Preferred
	Proc Natl Acad Sci USA	indications include neoplasms
-	85:6342-6346 (1988); Georas	and cancers, such as, leukemia,
	et al., Blood 92(12):4529-4538	lymphoma, melanoma, and
	(1998); Moffatt et al.,	prostate, breast, lung, colon,
	Transplantation 69(7):1521-	pancreatic, esophageal,
	1523 (2000); Curiel et al., Eur	stomach, brain, liver and
	J Immunol 27(8):1982-1987	urinary cancer. Other preferred
	(1997); and Masuda et al., J	indications include benign
	Biol Chem 275(38):29331-	dysproliferative disorders and
	29337 (2000), the contents of	pre-neoplastic conditions, such
	each of which are herein	as, for example, hyperplasia,
	incorporated by reference in its	metaplasia, and/or dysplasia.
	entirety. T cells that may be	Preferred indications include
	used according to these assays	anemia, pancytopenia,
-	are publicly available (e.g.,	leukopenia, thrombocytopenia,
	through the ATCC).	Hodgkin's disease, acute
	Exemplary T cells that may be	lymphocytic anemia (ALL),
	used according to these assays	plasmacytomas, multiple
	include the SUPT cell line,	myeloma, Burkitt's lymphoma,
	which is a suspension culture	arthritis, AIDS, granulomatous
	of IL-2 and IL-4 responsive T	disease, inflammatory bowel
	cells.	disease, sepsis, neutropenia,
		neutrophilia, psoriasis,
		suppression of immune
		reactions to transplanted

				organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
HSAXA83	1431	Activation of transcription through serum response element in immune cells (such as T-cells).	Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate the serum response factors and modulate the expression of genes involved in growth. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention)	A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, Crohn"s disease, multiple

below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated	immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications	include inflammation and inflammatory disorders, and treating joint damage in patients with rheumatoid arthritis. An additional highly	preferred indication is sepsis. Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma.	and/or as described below under "Hyperproliferative Disorders"). Additionally, highly preferred indications include neoplasms and	cancers, such as, for example, leukemia, lymphoma, melanoma, glioma (e.g., malignant glioma), solid tumors, and prostate, breast,	lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other preferred indications include
Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-	308 (1992); Henthom et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); and Black et al., Virus Genes	12(2):105-117 (1997), the content of each of which are herein incorporated by reference in its entirety. T	according to these assays are publicly available (e.g., through the ATCC).  Exemplary mouse T cells that	may be used according to these assays include the CTLL cell line, which is an IL-2 dependent suspension culture of T cells with cytotoxic	activity.	

					disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
	_				disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HSAYB43	1432	Endothelial Cell	Caspase Apoptosis. Assays for	A highly preferred
484			Apoptosis	caspase apoptosis are well	embodiment of the invention
				known in the art and may be	includes a method for
				used or routinely modified to	stimulating endothelial cell

	assess the ability of	growth. An alternative highly
	polypeptides of the invention	preferred embodiment of the
	(including antibodies and	invention includes a method
	agonists or antagonists of the	for inhibiting endothelial cell
	invention) to promote caspase	growth. A highly preferred
	protease-mediated apoptosis.	embodiment of the invention
	Induction of apoptosis in	includes a method for
	endothelial cells supporting the	stimulating endothelial cell
	vasculature of tumors is	proliferation. An alternative
	associated with tumor	highly preferred embodiment
	regression due to loss of tumor	of the invention includes a
	blood supply. Exemplary	method for inhibiting
	assays for caspase apoptosis	endothelial cell proliferation.
	that may be used or routinely	A highly preferred
	modified to test capase	embodiment of the invention
	apoptosis activity of	includes a method for
	polypeptides of the invention	stimulating apoptosis of
-	(including antibodies and	endothelial cells. An
	agonists or antagonists of the	alternative highly preferred
	invention) include the assays	embodiment of the invention
	disclosed in Lee et al., FEBS	includes a method for
	Lett 485(2-3): 122-126 (2000);	inhibiting (e.g., decreasing)
	Nor et al., J Vasc Res 37(3):	apoptosis of endothelial cells.
	209-218 (2000); and Karsan	A highly preferred
	and Harlan, J Atheroscler	embodiment of the invention
	Thromb 3(2): 75-80 (1996);	includes a method for
	the contents of each of which	stimulating angiogenisis. An
	are herein incorporated by	alternative highly preferred
	reference in its entirety.	embodiment of the invention
	Endothelial cells that may be	includes a method for
	used according to these assays	inhibiting angiogenesis. A

highly preferred embodiment of the invention includes a	method for reducing cardiac hypertrophy. An alternative	highly preferred embodiment	of the invention includes a method for inducing cardiac	hypertrophy. Highly	preferred indications include	neoplastic diseases (e.g., as	described below under	"Hyperproliferative	Disorders"), and disorders of	the cardiovascular system	(e.g., heart disease, congestive	heart failure, hypertension,	aortic stenosis,	cardiomyopathy, valvular	regurgitation, left ventricular	dysfunction, atherosclerosis	and atherosclerotic vascular	disease, diabetic nephropathy,	intracardiac shunt, cardiac	hypertrophy, myocardial	infarction, chronic	hemodynamic overload, and/or	as described below under	"Cardiovascular Disorders").	Highly preferred indications	include cardiovascular,	endothelial and/or angiogenic
are publicly available (e.g., through commercial sources).	Exemplary endothelial cells that may be used according to	these assays include bovine	aortic endothelial cells (bAEC), which are an example	of endothelial cells which line	blood vessels and are involved	in functions that include, but	are not limited to,	angiogenesis, vascular	permeability, vascular tone,	and immune cell extravasation.									-								
															-						-						

	disorders (e.g., systemic
	disorders that affect vessels
	such as diabetes mellitus, as
	well as diseases of the vessels
	themselves, such as of the
	arteries, capillaries, veins
	and/or lymphatics). Highly
	preferred are indications that
	stimulate angiogenesis and/or
	cardiovascularization. Highly
	preferred are indications that
	inhibit angiogenesis and/or
	cardiovascularization.
	Highly preferred indications
	include antiangiogenic activity
	to treat solid tumors,
	leukemias, and Kaposi"s
	sarcoma, and retinal disorders.
	Highly preferred indications
	include neoplasms and cancer,
	such as, Kaposi"s sarcoma,
	hemangioma (capillary and
	cavernous), glomus tumors,
	telangiectasia, bacillary
	angiomatosis,
	hemangioendothelioma,
	angiosarcoma,
	haemangiopericytoma,
	lymphangioma,
	lymphangiosarcoma. Highly
	preferred indications also

	hrostate breast ling colon
_	prostate, oreast, rung, colon, pancreatic, esophageal,
	stomach, brain, liver, and
	urinary cancer. Preferred
	indications include benign
	pre-neoplastic conditions, such
	as, for example, hyperplasia,
	metaplasia, and/or dysplasia.
	Highly preferred indications
	also include arterial disease,
	such as, atherosclerosis,
	hypertension, coronary artery
	disease, inflammatory
	vasculitides, Reynaud"s
	disease and Reynaud"s
	phenomenom, aneurysms,
	restenosis; venous and
	lymphatic disorders such as
	thrombophlebitis,
	lymphangitis, and
	lymphedema; and other
	vascular disorders such as
	peripheral vascular disease,
	and cancer. Highly
	preferred indications also
	include trauma such as
	wounds, burns, and injured
	tissue (e.g., vascular injury
	such as, injury resulting from

balloon angioplasty, and	atheroschlerotic lesions),	implant fixation, scarring,	ischemia reperfusion injury,	rheumatoid arthritis,	cerebrovascular disease, renal	diseases such as acute renal	failure, and osteoporosis.	Additional highly preferred	indications include stroke,	graft rejection, diabetic or	other retinopathies, thrombotic	and coagulative disorders,	vascularitis, lymph	angiogenesis, sexual disorders,	age-related macular	degeneration, and treatment	/prevention of endometriosis	and related conditions.	Additional highly preferred	indications include fibromas,	heart disease, cardiac arrest,	heart valve disease, and	vascular disease.	Preferred indications include	blood disorders (e.g., as	described below under	"Immune Activity", "Blood-	Related Disorders", and/or	"Cardiovascular Disorders").	Preferred indications include
																													-	

					autoimmune diseases (e.g.,
					rheumatoid arthritis, systemic
					lupus erythematosis, multiple
					sclerosis and/or as described
					below) and
					immunodeficiencies (e.g., as
					described below). Additional
					preferred indications include
					inflammation and
					inflammatory disorders (such
					as acute and chronic
					inflammatory diseases, e.g.,
			-		inflammatory bowel disease
					and Crohn's disease), and pain
					management.
	HSAYM40	1433	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
485				by T cells and has strong	embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced	stimulating (e.g., increasing)
				IgE production and increases	IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a
				IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,
				Deregulated expression of IL-6	reducing) IL-6 production. A
				has been linked to autoimmune	highly preferrred indication is
				disease, plasmacytomas,	the stimulation or enhancement
				myelomas, and chronic	of mucosal immunity. Highly
				hyperproliferative diseases.	preferred indications include
				Assays for immunomodulatory	blood disorders (e.g., as
				and differentiation factor	described below under
				proteins produced by a large	"Immune Activity", "Blood-

variety of cells where the	Related Disorders", and/or
expression level is strongly	"Cardiovascular Disorders"),
regulated by cytokines, growth	and infection (e.g., as
factors, and hormones are well	described below under
known in the art and may be	"Infectious Disease"). Highly
used or routinely modified to	preferred indications include
assess the ability of	autoimmune diseases (e.g.,
polypeptides of the invention	rheumatoid arthritis, systemic
(including antibodies and	lupus erythematosis, multiple
 agonists or antagonists of the	sclerosis and/or as described
 invention) to mediate	below) and
immunomodulation and	immunodeficiencies (e.g., as
differentiation and modulate T	described below). Highly
cell proliferation and function.	preferred indications also
Exemplary assays that test for	include boosting a B cell-
 immunomodulatory proteins	mediated immune response
evaluate the production of	and alternatively suppressing a
cytokines, such as IL-6, and	B cell-mediated immune
 the stimulation and	response. Highly preferred
upregulation of T cell	indications include
proliferation and functional	inflammation and
activities. Such assays that	inflammatory
may be used or routinely	disorders.Additional highly
modified to test	preferred indications include
immunomodulatory and	asthma and allergy. Highly
 diffferentiation activity of	preferred indications include
polypeptides of the invention	neoplastic diseases (e.g.,
(including antibodies and	myeloma, plasmacytoma,
agonists or antagonists of the	leukemia, lymphoma,
invention) include assays	melanoma, and/or as described
disclosed in Miraglia et al., J	below under

					1, 2, 2, 2, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,
					mennights, and Lyme Disease.
					An additonal preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
485	HSAYM40	1433	IgG in Human B cells SAC		
	HSAYM40	1433	Activation of	Assays for the activation of	A highly preferred
485	-		transcription	transcription through the	indication is allergy.
			through STAT6	Signal Transducers and	Another highly preferred
			response element in	Activators of Transcription	indication is asthma.
			immune cells (such	(STAT6) response element are	Additional highly preferred
			as T-cells).	well-known in the art and may	indications include
				be used or routinely modified	inflammation and
				to assess the ability of	inflammatory disorders.
				polypeptides of the invention	Preferred indications include
				(including antibodies and	blood disorders (e.g., as
				agonists or antagonists of the	described below under
~				invention) to regulate STAT6	"Immune Activity", "Blood-
				transcription factors and	Related Disorders", and/or
				modulate the expression of	"Cardiovascular Disorders").
				multiple genes. Exemplary	Preferred indications include
				assays for transcription	autoimmune diseases (e.g.,
-				through the STAT6 response	rheumatoid arthritis, systemic
				element that may be used or	lupus erythematosis, multiple
				routinely modified to test	sclerosis and/or as described
				STAT6 response element	below) and
				activity of the polypeptides of	immunodeficiencies (e.g., as
				the invention (including	described below).
				antibodies and agonists or	Preferred indications include

		antagonists of the invention)	neoplastic diseases (e.g.,
		include assays disclosed in	leukemia, lymphoma,
		Berger et al., Gene 66:1-10	melanoma, and/or as described
		(1998); Cullen and Malm,	below under
		Methods in Enzymol 216:362-	"Hyperproliferative
		368 (1992); Henthorn et al.,	Disorders"). Preferred
		Proc Natl Acad Sci USA	indications include neoplasms
		85:6342-6346 (1988); Georas	and cancers, such as, leukemia,
		et al., Blood 92(12):4529-4538	lymphoma, melanoma, and
		(1998); Moffatt et al.,	prostate, breast, lung, colon,
		Transplantation 69(7):1521-	pancreatic, esophageal,
		1523 (2000); Curiel et al., Eur	stomach, brain, liver and
		J Immunol 27(8):1982-1987	urinary cancer. Other preferred
		(1997); and Masuda et al., J	indications include benign
		Biol Chem 275(38):29331-	dysproliferative disorders and
		29337 (2000), the contents of	pre-neoplastic conditions, such
		each of which are herein	as, for example, hyperplasia,
		incorporated by reference in its	metaplasia, and/or dysplasia.
		entirety. T cells that may be	Preferred indications include
		used according to these assays	anemia, pancytopenia,
		are publicly available (e.g.,	leukopenia, thrombocytopenia,
		through the ATCC).	Hodgkin's disease, acute
		Exemplary T cells that may be	lymphocytic anemia (ALL),
		used according to these assays	plasmacytomas, multiple
		include the SUPT cell line,	myeloma, Burkitt's lymphoma,
		which is a suspension culture	arthritis, AIDS, granulomatous
		of IL-2 and IL-4 responsive T	disease, inflammatory bowel
_		cells.	disease, sepsis, neutropenia,
			neutrophilia, psoriasis,
			suppression of immune
			reactions to transplanted

					organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious
486	HSDAJ46	1434	Activation of transcription through NFAT response element in immune cells (such as natural killer cells).	Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and modulate expression of genes involved in immunomodulatory functions. Exemplary assays for transcription through the NFAT response element that may be used or routinely modified to test NFAT.	Highly preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below), boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications include inflammation and inflammatory disorders. An
				polypeptides of the invention	additional highly preferred

	(including antibodies and	indication is infection (e.g., an
	agonists or antagonists of the	infectious disease as described
	invention) include assays	below under "Infectious
	disclosed in Berger et al., Gene	Disease"). Preferred
	66:1-10 (1998); Cullen and	indications include neoplastic
	Malm, Methods in Enzymol	diseases (e.g., leukemia,
	216:362-368 (1992); Henthorn	lymphoma, and/or as described
	et al., Proc Natl Acad Sci USA	below under
	85:6342-6346 (1988);	"Hyperproliferative
	Aramburu et al., J Exp Med	Disorders"). Preferred
	182(3):801-810 (1995); De	indications include neoplasms
	Boer et al., Int J Biochem Cell	and cancers, such as, for
	Biol 31(10):1221-1236 (1999);	example, leukemia, lymphoma,
	Fraser et al., Eur J Immunol	and prostate, breast, lung,
	29(3):838-844 (1999); and	colon, pancreatic, esophageal,
	Yeseen et al., J Biol Chem	stomach, brain, liver and
-	268(19):14285-14293 (1993),	urinary cancer. Other preferred
	the contents of each of which	indications include benign
	are herein incorporated by	dysproliferative disorders and
	reference in its entirety. NK	pre-neoplastic conditions, such
	cells that may be used	as, for example, hyperplasia,
	according to these assays are	metaplasia, and/or dysplasia.
	publicly available (e.g.,	Preferred indications also
	through the ATCC).	include anemia, pancytopenia,
	Exemplary human NK cells	leukopenia, thrombocytopenia,
	that may be used according to	Hodgkin's disease, acute
	these assays include the NK-	lymphocytic anemia (ALL),
	YT cell line, which is a human	plasmacytomas, multiple
	natural killer cell line with	myeloma, Burkitt's lymphoma,
	cytolytic and cytotoxic	arthritis, AIDS, granulomatous
	activity.	disease, inflammatory bowel

					disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, asthma and allergy.
487	HSDEK49	1435	Activation of transcription through serum response element in immune cells (such as T-cells).	Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate the serum response factors and modulate the expression of genes involved in growth. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include assays disclosed in	A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, Crohn"s disease, multiple

		Berger et al Gene 66:1-10	helow) imminodeficiencies
		1000). Call	Colowy, illiminationalistics
		(1998); Cullen and Malm,	(e.g., as described below),
		Methods in Enzymol 216:362-	boosting a T cell-mediated
		368 (1992); Henthorn et al.,	immune response, and
-		Proc Natl Acad Sci USA	suppressing a T cell-mediated
		85:6342-6346 (1988); and	immune response. Additional
		Black et al., Virus Genes	highly preferred indications
	_	12(2):105-117 (1997), the	include inflammation and
		content of each of which are	inflammatory disorders, and
		herein incorporated by	treating joint damage in
		reference in its entirety. T	patients with rheumatoid
		cells that may be used	arthritis. An additional highly
		 according to these assays are	preferred indication is sepsis.
-		publicly available (e.g.,	Highly preferred indications
		through the ATCC).	include neoplastic diseases
		Exemplary mouse T cells that	(e.g., leukemia, lymphoma,
		may be used according to these	and/or as described below
	<del></del>	assays include the CTLL cell	under "Hyperproliferative
		line, which is an IL-2	Disorders"). Additionally,
		dependent suspension culture	highly preferred indications
		of T cells with cytotoxic	include neoplasms and
		activity.	cancers, such as, for example,
			Ieukemia, Iymphoma,
			melanoma, glioma (e.g.,
			malignant glioma), solid
			tumors, and prostate, breast,
			lung, colon, pancreatic,
			esophageal, stomach, brain,
			liver and urinary cancer. Other
			preferred indications include
			benign dysproliferative

					disorders and pre-neoplastic
		-			conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
		-			Hodgkin's disease, acute
-					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
_					disease as described below
					under "Infectious Disease").
	HSDEK49	1435	Regulation of	Assays for the regulation of	A highly preferred
487			transcription of	transcription of Malic Enzyme	indication is diabetes mellitus.
			Malic Enzyme in	are well-known in the art and	An additional highly preferred
			adipocytes	may be used or routinely	indication is a complication

	modified to assess the ability	associated with diabetes (e.g.,
	of polypeptides of the	diabetic retinopathy, diabetic
	invention (including antibodies	nephropathy, kidney disease
	and agonists or antagonists of	(e.g., renal failure,
	the invention) to regulate	nephropathy and/or other
-	transcription of Malic Enzyme,	diseases and disorders as
	a key enzyme in lipogenesis.	described in the "Renal
	Malic enzyme is involved in	Disorders" section below),
	lipogenesisand its expression is	diabetic neuropathy, nerve
	stimulted by insulin. ME	disease and nerve damage
	promoter contains two direct	(e.g., due to diabetic
	repeat (DR1)- like elements	neuropathy), blood vessel
	MEp and MEd identified as	blockage, heart disease, stroke,
	putative PPAR response	impotence (e.g., due to diabetic
	elements. ME promoter may	neuropathy or blood vessel
	also responds to AP1 and other	blockage), seizures, mental
	transcription factors.	confusion, drowsiness,
	Exemplary assays that may be	nonketotic hyperglycemic-
	used or routinely modified to	hyperosmolar coma,
	test for regulation of	cardiovascular disease (e.g.,
	transcription of Malic Enzyme	heart disease, atherosclerosis,
	(in adipoocytes) by	microvascular disease,
	polypeptides of the invention	hypertension, stroke, and other
	(including antibodies and	diseases and disorders as
	agonists or antagonists of the	described in the
	invention) include assays	"Cardiovascular Disorders"
	disclosed in: Streeper, R.S., et	section below), dyslipidemia,
-	al., Mol Endocrinol,	endocrine disorders (as
	12(11):1778-91 (1998);	described in the "Endocrine
	Garcia-Jimenez, C., et al., Mol	Disorders" section below),
	Endocrinol, 8(10):1361-9	neuropathy, vision impairment

				(1994); Barroso, I., et al., J	(e.g., diabetic retinopathy and
				Biol Chem. 274(25):17997-	blindness), ulcers and impaired
				8004 (1999); Ijpenberg, A., et	wound healing, and infection
				al., J Biol Chem,	(e.g., infectious diseases and
				272(32):20108-20117 (1997);	disorders as described in the
				Berger, et al., Gene 66:1-10	"Infectious Diseases" section
				(1988); and, Cullen, B., et al.,	below, especially of the
_				Methods in Enzymol.	urinary tract and skin), carpal
				216:362–368 (1992), the	tunnel syndrome and
				contents of each of which is	Dupuytren's contracture).
				herein incorporated by	An additional highly preferred
				reference in its entirety.	indication is obesity and/or
				Hepatocytes that may be used	complications associated with
				according to these assays are	obesity. Additional highly
				publicly available (e.g.,	preferred indications include
				through the ATCC) and/or	weight loss or alternatively,
				may be routinely generated.	weight gain. Aditional
				Exemplary hepatocytes that	highly preferred indications are
				may be used according to these	complications associated with
				assays includes the H4IIE rat	insulin resistance.
				liver hepatoma cell line.	
487	HSDEK49	1435	MIP-1a in HMC		
	HSDER95	1436	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
488				by T cells and has strong	embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced	stimulating (e.g., increasing)
				IgE production and increases	IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a
				IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,

Deregulated expression of IL-6 reducing) IL-6 production. A has been linked to autoimmune heighty preferred indications is disease, plasmacytomas, and chronic mychomas, and chronic hyporporilicative diseases.  Assays for immunomodulatory and differentiation factor and differentiation factor and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth a factors, and hormones are well described below under known in the art and may be used or routinely modified to assess the ability of prolubing antibodies and inferioring antibodies and inferioring antibodies and inferioring antibodies and inferioring antibodies and immunomodulation and function of Exemplars assays that est for immunomodulation of cell-mediated immune response may be used or routinely and inferior or estimated in the strainmant or differentiation and differentiation and differentiation and directional inflammation and activities, such as IL-6, and alternatively suppressing a servivities. Such assays that alimation and indications include positively may be used or routinely and production of disorders. Additional highly metals and or an expense that the stimulation and functional disorders. Additional highly and alternatively suppressing a service of continely and production of described below). Highly preferred indications include possible and production and functional disorders. Additional highly described below and production and functional disorders. Additional highly and the stimulation and functional disorders. Additional highly described below.
Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases.  Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to mediate immunomodulation and differentiation and modulate T cell proliferation and modulate T cell proliferation and function. Exemplary assays that test for immunomodulatory proteins evaluate the production of cytokines, such as IL-6, and the stimulation and functional activities. Such assays that may be used or routinely may be used or routinely

	modified to test	preferred indications include
	immunomodulatory and	asthma and allergy. Highly
	diffferentiation activity of	preferred indications include
	polypeptides of the invention	neoplastic diseases (e.g.,
	(including antibodies and	myeloma, plasmacytoma,
	agonists or antagonists of the	leukemia, lymphoma,
	invention) include assays	melanoma, and/or as described
	disclosed in Miraglia et al., J	below under
-	Biomolecular Screening 4:193-	"Hyperproliferative
	204(1999); Rowland et al.,	Disorders"). Highly preferred
	"Lymphocytes: a practical	indications include neoplasms
 	approach" Chapter 6:138-160	and cancers, such as, myeloma,
	(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
-	Immunol 158:2919-2925	lymphoma, melanoma, and
	(1997), the contents of each of	prostate, breast, lung, colon,
	which are herein incorporated	pancreatic, esophageal,
	by reference in its entirety.	stomach, brain, liver and
	Human dendritic cells that may	urinary cancer. Other preferred
	be used according to these	indications include benign
	assays may be isolated using	dysproliferative disorders and
	techniques disclosed herein or	pre-neoplastic conditions, such
 	otherwise known in the art.	as, for example, hyperplasia,
	Human dendritic cells are	metaplasia, and/or dysplasia.
	antigen presenting cells in	Preferred indications include
	suspension culture, which,	anemia, pancytopenia,
	when activated by antigen	leukopenia, thrombocytopenia,
	and/or cytokines, initiate and	Hodgkin's disease, acute
	upregulate T cell proliferation	lymphocytic anemia (ALL),
	and functional activities.	multiple myeloma, Burkitt's
		lymphoma, arthritis, AIDS,
		granulomatous disease,

inflammatory bowel disease, sepsis, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease. An additonal preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").	Adipocyte ERK phosphorylation of Elk-1, an signaling pathway. indication of activation of extracellular signal regulated kinase (ERK). ERK pathway regulates cell growth, proliferation and differentiation. Cells were pretreated with SID supernatants for 15-18 hours, and then 100 nM of insulin was added to stimulate ERK kinase. Phosphorylation of Elk-1 was measured after a 20 minute incubation. Pre- adipocytes that may be used
	HSDEZ20
	489

	Highly preferred indications include asthma, allergy, hypersensitivity reactions, inflammation, and inflammatory disorders. Additional highly preferred indications include immune and hematopoietic disorders
publicly available (e.g., through the ATCC) and/or may be routinely generated. Exemplary mouse adipocyte cells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art. Cells were differentiated to an adipose-like state before being used in the screen. See Green et al., Cell 3: 127-133 (1974), the contents of which are herein incorporated by reference in its entirety.	Kinase assay. JNK kinase assays for signal transduction that regulate cell proliferation, activation, or apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention
	Activation of JNK Signaling Pathway in immune cells (such as eosinophils).
	1437
	HSDEZ20
	489

			(including antibodies and	(e.g., as described below under
		8	agonists or antagonists of the	"Immune Activity", and
		· <del></del>	invention) to promote or	"Blood-Related Disorders"),
		<u>. =</u>	inhibit cell proliferation,	autoimmune diseases (e.g.,
			activation, and apoptosis.	rheumatoid arthritis, systemic
		田	Exemplary assays for JNK	lupus erythematosis, Crohn"s
		<u> </u>	kinase activity that may be	disease, multiple sclerosis
		ä	used or routinely modified to	and/or as described below),
		te	test JNK kinase-induced	immunodeficiencies (e.g., as
			activity of polypeptides of the	described below). Highly
		-11	invention (including antibodies	preferred indications also
			and agonists or antagonists of	include boosting or inhibiting
		7	the invention) include the	immune cell proliferation.
		8	assays disclosed in Forrer et	Preferred indications include
	_	a	al., Biol Chem 379(8-9):1101-	neoplastic diseases (e.g.,
		1	1110 (1998); Gupta et al., Exp	leukemia, lymphoma, and/or as
		<u> </u>	Cell Res 247(2): 495-504	described below under
			(1999); Kyriakis JM, Biochem	"Hyperproliferative
		S	Soc Symp 64:29-48 (1999);	Disorders"). Highly preferred
		<u> </u>	Chang and Karin, Nature	indications include boosting an
_		4	410(6824):37-40 (2001); and	eosinophil-mediated immune
		<u> </u>	Cobb MH, Prog Biophys Mol	response, and suppressing an
		<u> </u>	Biol 71(3-4):479-500 (1999);	eosinophil-mediated immune
		7	the contents of each of which	response.
		8	are herein incorporated by	
			reference in its entirety.	
		Ш	Exemplary cells that may be	
		<u> </u>	used according to these assays	
		<u>:=</u>	include eosinophils.	
		<u>—</u>	Eosinophils are important in	
		<del>-</del>	the late stage of allergic	

reactions; they are recruited to tissues and mediate the inflammatory response of late stage allergic reaction.  Moreover, exemplary assays that may be used or routinely modified to assess the ability of polypeptides of the	invention (including antibodies and agonists or antagonists of the invention) to modulate signal transduction, cell proliferation, activation, or apoptosis in eosinophils include assays disclosed and/or cited in: Zhang JP, et al., "Role of caspases in dexamethasone-induced apoptosis and activation of c-Jun NH2-terminal kinase and p38	mitogen-activated protein kinase in human eosinophils" Clin Exp Immunol; Oct;122(1):20-7 (2000); Hebestreit H, et al., "Disruption of fas receptor signaling by nitric oxide in eosinophils" J Exp Med; Feb 2;187(3):415-25 (1998); J Allergy Clin Immunol 1999 Sep;104(3 Pt 1):565-74; and,
		K K C C C K L C C C K L C C C K L C C C C

HSDFW45	1438	SEAP in 293/ISRE	Sousa AR, et al., "In vivo resistance to corticosteroids in bronchial asthma is associated with enhanced phosyphorylation of JUN N-terminal kinase and failure of prednisolone to inhibit JUN N-terminal kinase phosphorylation" J Allergy Clin Immunol; Sep;104(3 Pt 1):565-74 (1999); the contents of each of which are herein incorporated by reference in its entirety.	
HSDFW45	1438	Activation of transcription through cAMP response element (CRE) in preadipocytes.	Assays for the activation of transcription through the cAMP response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to increase cAMP, regulate CREB transcription factors, and modulate expression of genes involved in a wide variety of cell functions. For example, a	A highly preferred indication is obesity and/or complications associated with obesity.  Additional highly preferred indications include weight loss or alternatively, weight gain. An additional highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, kidney disease (e.g., renal failure, nephropathy and/or other

	3T3-L1/CRE reporter assay	diseases and disorders as
	may be used to identify factors	described in the "Renal
-	that activate the cAMP	Disorders" section below),
	signaling pathway. CREB	diabetic neuropathy, nerve
	plays a major role in	disease and nerve damage
	adipogenesis, and is involved	(e.g., due to diabetic
	in differentiation into	neuropathy), blood vessel
	adipocytes. CRE contains the	blockage, heart disease, stroke,
	binding sequence for the	impotence (e.g., due to diabetic
	transcription factor CREB	neuropathy or blood vessel
	(CRE binding protein).	blockage), seizures, mental
	Exemplary assays for	confusion, drowsiness,
	transcription through the	nonketotic hyperglycemic-
	cAMP response element that	hyperosmolar coma,
	may be used or routinely	cardiovascular disease (e.g.,
	modified to test cAMP-	heart disease, atherosclerosis,
	response element activity of	microvascular disease,
	polypeptides of the invention	hypertension, stroke, and other
	(including antibodies and	diseases and disorders as
	agonists or antagonists of the	described in the
	invention) include assays	"Cardiovascular Disorders"
	disclosed in Berger et al., Gene	section below), dyslipidemia,
	66:1-10 (1998); Cullen and	endocrine disorders (as
	Malm, Methods in Enzymol	described in the "Endocrine
	216:362-368 (1992); Henthorn	Disorders" section below),
	et al., Proc Natl Acad Sci USA	neuropathy, vision impairment
	85:6342-6346 (1988); Reusch	(e.g., diabetic retinopathy and
	et al., Mol Cell Biol	blindness), ulcers and impaired
	20(3):1008-1020 (2000); and	wound healing, and infection
	Klemm et al., J Biol Chem	(e.g., infectious diseases and
	273:917-923 (1998), the	disorders as described in the

				contents of each of which are	"Infectious Diseases" section
				herein incorporated by	below, especially of the
				reference in its entirety. Pre-	urinary tract and skin), carpal
				adipocytes that may be used	tunnel syndrome and
				according to these assays are	Dupuytren's contracture).
				publicly available (e.g.,	Additional highly preferred
				through the ATCC) and/or	indications are complications
				may be routinely generated.	associated with insulin
				Exemplary mouse adipocyte	resistance.
				cells that may be used	
				according to these assays	
				include 3T3-L1 cells. 3T3-L1	
				is an adherent mouse	
				preadipocyte cell line that is a	
				continuous substrain of 3T3	
				fibroblast cells developed	
				through clonal isolation and	
				undergo a pre-adipocyte to	
				adipose-like conversion under	
				appropriate differentiation	
				conditions known in the art.	
490	HSDFW45	1438	SEAP in HIB/CRE		
	HSDFW45	1438	Activation of	This reporter assay measures	Highly preferred indications
490			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and

acti	activation of transcription	inflammatory disorders.
thre	through the GATA3 response	Preferred indications also
eler	element are well-known in the	include blood disorders (e.g.,
art	art and may be used or	as described below under
ron	routinely modified to assess	"Immune Activity", "Blood-
the	the ability of polypeptides of	Related Disorders", and/or
the	the invention (including	"Cardiovascular Disorders").
ant	antibodies and agonists or	Preferred indications include
ant	antagonists of the invention) to	autoimmune diseases (e.g.,
reg	regulate GATA3 transcription	rheumatoid arthritis, systemic
fac	factors and modulate	lupus erythematosis, multiple
exp	expression of mast cell genes	sclerosis and/or as described
 mi	important for immune response	below) and
dev	development. Exemplary	immunodeficiencies (e.g., as
ass	assays for transcription	described below). Preferred
thre	through the GATA3 response	indications include neoplastic
eler	element that may be used or	diseases (e.g., leukemia,
ron	routinely modified to test	lymphoma, melanoma,
GA	GATA3-response element	prostate, breast, lung, colon,
acti	activity of polypeptides of the	pancreatic, esophageal,
vni	invention (including antibodies	stomach, brain, liver, and
and	and agonists or antagonists of	urinary tract cancers and/or as
the	the invention) include assays	described below under
disc	disclosed in Berger et al., Gene	"Hyperproliferative
:99	66:1-10 (1998); Cullen and	Disorders"). Other preferred
 Ma	Malm, Methods in Enzymol	indications include benign
216	216:362-368 (1992); Henthorn	dysproliferative disorders and
et a	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
85:	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
et a		metaplasia, and/or dysplasia.
On	Quant Biol 64: 563-571 (1999);	Preferred indications include

				Rodriguez-Palmero et al Eur	anemia, pancytopenia,
				J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
				(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
				Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
				Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
				14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
				contents of each of which are	lymphoma, arthritis, AIDS,
				herein incorporated by	granulomatous disease,
				reference in its entirety. Mast	inflammatory bowel disease,
				cells that may be used	sepsis, neutropenia,
				according to these assays are	neutrophilia, psoriasis,
				publicly available (e.g.,	suppression of immune
				through the ATCC).	reactions to transplanted
				Exemplary human mast cells	organs and tissues, hemophilia,
				that may be used according to	hypercoagulation, diabetes
				these assays include the HMC-	mellitus, endocarditis,
				1 cell line, which is an	meningitis, and Lyme Disease.
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HSDFW45	1438	Activation of	This reporter assay measures	Highly preferred indications
490			transcription	activation of the NFAT	include allergy, asthma, and
			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and

		activation of transcription	inflammatory disorders.
		through the Nuclear Factor of	Preferred indications also
		Activated T cells (NFAT)	include blood disorders (e.g.,
		response element are well-	as described below under
		known in the art and may be	"Immune Activity", "Blood-
		used or routinely modified to	Related Disorders", and/or
		assess the ability of	"Cardiovascular Disorders").
		polypeptides of the invention	Preferred indications include
		(including antibodies and	autoimmune diseases (e.g.,
		agonists or antagonists of the	rheumatoid arthritis, systemic
		invention) to regulate NFAT	lupus erythematosis, multiple
		transcription factors and	sclerosis and/or as described
		modulate expression of genes	below) and
	-	involved in	immunodeficiencies (e.g., as
		immunomodulatory functions.	described below). Preferred
		Exemplary assays for	indications include neoplastic
		transcription through the	diseases (e.g., leukemia,
		NFAT response element that	lymphoma, melanoma,
		may be used or routinely	prostate, breast, lung, colon,
		modified to test NFAT-	pancreatic, esophageal,
		response element activity of	stomach, brain, liver, and
		polypeptides of the invention	urinary tract cancers and/or as
		(including antibodies and	described below under
		agonists or antagonists of the	"Hyperproliferative
		invention) include assays	Disorders"). Other preferred
		disclosed in Berger et al., Gene	indications include benign
-		66:1-10 (1998); Cullen and	dysproliferative disorders and
		Malm, Methods in Enzymol	pre-neoplastic conditions, such
		216:362-368 (1992); Henthorn	as, for example, hyperplasia,
		et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
		85:6342-6346 (1988); De Boer	Preferred indications include

				et al., Int J Biochem Cell Biol	anemia, pancytopenia,
				31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
				et al., J Immunol	leukemias, Hodgkin's disease,
				165(12):7215-7223 (2000);	acute lymphocytic anemia
				Hutchinson and McCloskey, J	(ALL), plasmacytomas,
				Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
				16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
				al., J Exp Med 188:527-537	granulomatous disease,
				(1998), the contents of each of	inflammatory bowel disease,
				which are herein incorporated	sepsis, neutropenia,
				by reference in its entirety.	neutrophilia, psoriasis,
				Mast cells that may be used	suppression of immune
				according to these assays are	reactions to transplanted
				publicly available (e.g.,	organs and tissues, hemophilia,
				through the ATCC).	hypercoagulation, diabetes
				Exemplary human mast cells	mellitus, endocarditis,
				that may be used according to	meningitis, and Lyme Disease.
				these assays include the HMC-	
				1 cell line, which is an	
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HSDFW45	1438	SEAP in Jurkat/IL4		
490			promoter		
	HSDFW45	1438	SEAP in Jurkat/IL4		
490			promoter (antiCD3		
			co-stim)		
	HSDJA15	1439	Activation of	Kinase assay. Kinase assays,	A highly preferred

491		Adinocyte PI3	for example an GSK-3 assays	embodiment of the invention
		Kingee Signalling	for DI3 Linese cional	includes a method for
		Nilase Signaling	IOI FID MINASE SIBINAL	iliciades a illetiloa loi
		Pathway	transduction that regulate	increasing adipocyte survival
• .			glucose metabolism and cell	An alternative highly preferred
			survival are well-known in the	embodiment of the invention
			art and may be used or	includes a method for
			routinely modified to assess	decreasing adipocyte survival.
			the ability of polypeptides of	A preferred embodiment of the
			the invention (including	invention includes a method
			antibodies and agonists or	for stimulating adipocyte
			antagonists of the invention) to	proliferation. An alternative
			promote or inhibit glucose	highly preferred embodiment
			metabolism and cell survival.	of the invention includes a
			Exemplary assays for PI3	method for inhibiting
	-		kinase activity that may be	adipocyte proliferation. A
28			used or routinely modified to	preferred embodiment of the
20			test PI3 kinase-induced activity	invention includes a method
			of polypeptides of the	for stimulating adipocyte
	_		invention (including antibodies	differentiation. An alternative
	• • • •		and agonists or antagonists of	highly preferred embodiment
			the invention) include assays	of the invention includes a
			disclosed in Forrer et al., Biol	method for inhibiting
			Chem 379(8-9):1101-1110	adipocyte differentiation.
			(1998); Nikoulina et al.,	Highly preferred indications
			Diabetes 49(2):263-271	include endocrine disorders
			(2000); and Schreyer et al.,	(e.g., as described below under
-	••		Diabetes 48(8):1662-1666	"Endocrine Disorders").
			(1999), the contents of each of	Preferred indications include
			which are herein incorporated	neoplastic diseases (e.g.,
			by reference in its entirety.	lipomas, liposarcomas, and/or
			Mouse adipocyte cells that	as described below under

may be used according to these assays are publicly available	"Hyperproliferative Disorders"), blood disorders
(e.g., through the ATCC).	(e.g., hypertension, congestive
Exemplary mouse adipocyte	heart failure, blood vessel
cells that may be used	blockage, heart disease, stroke,
according to these assays	impotence and/or as described
include 3T3-L1 cells. 3T3-L1	below under "Immune
is an adherent mouse	Activity", "Cardiovascular
preadipocyte cell line that is a	Disorders", and/or "Blood-
continous substrain of 3T3	Related Disorders"), immune
fibroblast cells developed	disorders (e.g., as described
through clonal isolation and	below under "Immune
undergo a pre-adipocyte to	Activity"), neural disorders
adipose-like conversion under	(e.g., as described below under
 appropriate differentiation	"Neural Activity and
conditions known in the art.	Neurological Diseases"), and
	infection (e.g., as described
	below under "Infectious
	Disease"). A highly
	preferred indication is diabetes
-	mellitus. An additional
	highly preferred indication is a
-	complication associated with
	diabetes (e.g., diabetic
	retinopathy, diabetic
	nephropathy, kidney disease
	(e.g., renal failure,
	nephropathy and/or other
	diseases and disorders as
	described in the "Renal
	Disorders" section below)

diabetic neuropathy, nerve
duscase and nerve daniage (e) due to diabetic neuropathy),
blood vessel blockage, heart
disease, stroke, impotence
(e.g., due to diabetic
neuropathy or blood vessel
blockage), seizures, mental
confusion, drowsiness,
nonketotic hyperglycemic-
hyperosmolar coma,
cardiovascular disease (e.g.,
heart disease, atherosclerosis,
microvascular disease,
hypertension, stroke, and other
diseases and disorders as
described in the
"Cardiovascular Disorders"
 section below), dyslipidemia,
endocrine disorders (as
described in the "Endocrine
Disorders" section below),
neuropathy, vision impairment
(e.g., diabetic retinopathy and
blindness), ulcers and impaired
wound healing, infection (e.g.,
infectious diseases and
 disorders as described in the
"Infectious Diseases" section
below, especially of the
urinary tract and skin), carnal

			tunnel syndrome and
-			Diminition's contracting)
			Dupuyiren s contracture).
			An additional highly preferred
			indication is obesity and/or
	-		complications associated with
			obesity. Additional highly
			preferred indications include
			weight loss or alternatively,
			weight gain. Additional
			highly preferred indications are
			complications associated with
			insulin resistance.
			Additional highly preferred
			indications are disorders of the
			musculoskeletal systems
			including myopathies,
			muscular dystrophy, and/or as
			described herein.
			Additional highly preferred
			indications include,
			hypertension, coronary artery
,			disease, dyslipidemia,
			gallstones, osteoarthritis,
			degenerative arthritis, eating
			disorders, fibrosis, cachexia,
			and kidney diseases or
			disorders. Highly preferred
			indications include neoplasms
			and cancer, such as, lipoma,
			liposarcoma, lymphoma,
			leukemia and breast, colon.

					and kidney cancer. Additional highly preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Other preferred indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia.
491	HSDJA15	1439	Activation of transcription through serum response element in immune cells (such as T-cells).	Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate the serum response factors and modulate the expression of genes involved in growth. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and aconists or	A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related bisorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lumis erythematosis

Crohn"s disease, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated	immune response, and suppressing a T cell-mediated immune response. Additional highly preferred indications	include inflammation and inflammatory disorders, and treating joint damage in patients with rheumatoid	artificities. An additional nightly preferred indication is sepsis. Highly preferred indications include neoplastic diseases	(e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Additionally, highly preferred indications	include neoplasms and cancers, such as, for example, leukemia, lymphoma, melanoma, glioma (e.g.,	tumors, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and urinary cancer. Other
antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-	368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); and Black et al., Virus Genes	12(2):105-117 (1997), the content of each of which are herein incorporated by reference in its entirety. T	cells that may be used according to these assays are publicly available (e.g., through the ATCC).	Exemplary mouse T cells that may be used according to these assays include the CTLL cell line, which is an IL-2 dependent suspension culture	of T cells with cytotoxic activity.	

					nreferred indications include
					benign dysproliferative
					disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
					Preferred indications include
					anemia, pancytopenia,
					leukopenia, thrombocytopenia,
					Hodgkin's disease, acute
					lymphocytic anemia (ALL),
					plasmacytomas, multiple
					myeloma, Burkitt's lymphoma,
					arthritis, AIDS, granulomatous
					disease, inflammatory bowel
					disease, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
491	HSDJA15	1439	Activation of transcription	This reporter assay measures activation of the GATA-3	Highly preferred indications include allergy, asthma, and
					67,

	through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
-	response element in	human mast cell line.	indications include infection
	immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
-	as mast cells).	cells has been linked to	described below under
		cytokine and chemokine	"Infectious Disease"), and
-		production. Assays for the	inflammation and
		activation of transcription	inflammatory disorders.
		through the GATA3 response	Preferred indications also
		element are well-known in the	include blood disorders (e.g.,
-		art and may be used or	as described below under
		routinely modified to assess	"Immune Activity", "Blood-
		the ability of polypeptides of	Related Disorders", and/or
		the invention (including	"Cardiovascular Disorders").
		antibodies and agonists or	Preferred indications include
		antagonists of the invention) to	autoimmune diseases (e.g.,
		regulate GATA3 transcription	rheumatoid arthritis, systemic
		factors and modulate	lupus erythematosis, multiple
		expression of mast cell genes	sclerosis and/or as described
		important for immune response	below) and
		development. Exemplary	immunodeficiencies (e.g., as
		assays for transcription	described below). Preferred
		through the GATA3 response	indications include neoplastic
		element that may be used or	diseases (e.g., leukemia,
		routinely modified to test	lymphoma, melanoma,
		GATA3-response element	prostate, breast, lung, colon,
		activity of polypeptides of the	pancreatic, esophageal,
		invention (including antibodies	stomach, brain, liver, and
		and agonists or antagonists of	urinary tract cancers and/or as
		the invention) include assays	described below under
		disclosed in Berger et al., Gene	"Hyperproliferative
		66:1-10 (1998); Cullen and	Disorders"). Other preferred

				Malm. Methods in Enzymol	indications include benign
				216:362-368 (1992); Henthorn	dysproliferative disorders and
				et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
				85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
				et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
				Quant Biol 64:563-571 (1999);	Preferred indications include
				Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
				J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
				(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
				Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
				Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
				14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
				contents of each of which are	lymphoma, arthritis, AIDS,
				herein incorporated by	granulomatous disease,
				reference in its entirety. Mast	inflammatory bowel disease,
				cells that may be used	sepsis, neutropenia,
				according to these assays are	neutrophilia, psoriasis,
				publicly available (e.g.,	suppression of immune
				through the ATCC).	reactions to transplanted
				Exemplary human mast cells	organs and tissues, hemophilia,
				that may be used according to	hypercoagulation, diabetes
				these assays include the HMC-	mellitus, endocarditis,
				1 cell line, which is an	meningitis, and Lyme Disease.
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HSDJA15	1439	Production of IL-5	IL-5 FMAT. Assays for	A highly preferred
491				immunomodulatory proteins	embodiment of the invention

secreted by TH2 cells, mast	includes a method for
cells, basophils, and	inhibiting (e.g., reducing) IL-5
eosinophils that stimulate	production. An alternative
eosinophil function and B cell	highly preferred embodiment
Ig production and promote	of the invention includes a
polarization of CD4+ cells into	method for stimulating (e.g.,
TH2 cells are well known in	increasing) IL-5 production.
the art and may be used or	A highly preferred
routinely modified to assess	embodiment of the invention
the ability of polypeptides of	includes a method for
the invention (including	stimulating (e.g., increasing)
antibodies and agonists or	immunoglobulin production.
antagonists of the invention) to	An alternative highly preferred
mediate immunomodulation,	embodiment of the invention
stimulate immune cell	includes a method for
function, modulate B cell Ig	inhibiting (e.g., decreasing)
production, modulate immune	immunoglobulin production.
cell polarization, and/or	A highly preferred indication
mediate humoral or cell-	includes allergy. A highly
mediated immunity.	preferred indication includes
Exemplary assays that test for	asthma. A highly preferred
immunomodulatory proteins	indication includes rhinitis.
evaluate the production of	An additional highly preferred
cytokines, such as IL-5, and	indication is infection (e.g., an
the stimulation of eosinophil	infectious disease as described
function and B cell Ig	below under "Infectious
production. Such assays that	Disease"), and inflammation
may be used or routinely	and inflammatory disorders.
modified to test	Preferred indications include
immunomodulatory activity of	blood disorders (e.g., as
polypeptides of the invention	described below under

		(including antibodies and	"Immune Activity", "Blood-
		agonists or antagonists of the	Related Disorders", and/or
		invention) include the assays	"Cardiovascular Disorders").
		disclosed in Miraglia et al., J	Preferred indications include
	-	Biomolecular Screening 4:193-	autoimmune diseases (e.g.,
		204 (1999); Rowland et al.,	rheumatoid arthritis, systemic
		"Lymphocytes: a practical	lupus erythematosis, multiple
-		approach" Chapter 6:138-160	sclerosis and/or as described
190		(2000); Ohshima et al., Blood	below) and
		92(9):3338-3345 (1998); Jung	immunodeficiencies (e.g., as
		et al., Eur J Immunol	described below). Preferred
		25(8):2413-2416 (1995); Mori	indications include neoplastic
		et al., J Allergy Clin Immunol	diseases (e.g., leukemia,
		106(1 Pt 2):558-564 (2000);	lymphoma, melanoma, and/or
-		and Koning et al., Cytokine	as described below under
		9(6):427-436 (1997), the	"Hyperproliferative
		contents of each of which are	Disorders"). Preferred
	-	herein incorporated by	indications include neoplasms
		reference in its entirety.	and cancers, such as, leukemia,
		Human T cells that may be	lymphoma, melanoma, and
		used according to these assays	prostate, breast, lung, colon,
		may be isolated using	pancreatic, esophageal,
		techniques disclosed herein or	stomach, brain, liver and
		otherwise known in the art.	urinary cancer. Other preferred
		Human T cells are primary	indications include benign
		human lymphocytes that	dysproliferative disorders and
		mature in the thymus and	pre-neoplastic conditions, such
		express a T cell receptor and	as, for example, hyperplasia,
		CD3, CD4, or CD8. These	metaplasia, and/or dysplasia.
		cells mediate humoral or cell-	Preferred indications include
		mediated immunity and may	anemia, pancytopenia,

leukopenia, thrombocytopenia, leukemias, Hodgkin's disease, acute lymphocytic anemia (ALL), plasmacytomas, multiple myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, melitus, and Lyme Disease.	A highly preferred embodiment of the invention includes a method for stimulating endothelial cell growth. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell growth. A highly preferred embodiment of the invention includes a method for stimulating endothelial cell proliferation. An alternative highly preferred embodiment of the invention of the invention includes a
be preactivated to enhance responsiveness to immunomodulatory factors.	Caspase Apoptosis Rescue. Assays for caspase apoptosis rescue are well known in the art and may be used or routinely modified to assess the ability of the polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to inhibit caspase proteasemediated apoptosis.  Exemplary assays for caspase apoptosis that may be used or routinely modified to test caspase apoptosis rescue of
	Protection from Endothelial Cell Apoptosis.
	1440
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	polypeptides of the invention	method for inhibiting
	(including antibodies and	endothelial cell proliferation.
	agonists or antagonists of the	A highly preferred
	invention) include the assays	embodiment of the invention
	disclosed in Romeo et al.,	includes a method for
	Cardiovasc Res 45(3): 788-794	stimulating endothelial cell
	(2000); Messmer et al., Br J	growth. An alternative highly
	 Pharmacol 127(7): 1633-1640	preferred embodiment of the
	(1999); and J Atheroscler	invention includes a method
	 Thromb 3(2): 75-80 (1996);	for inhibiting endothelial cell
	the contents of each of which	growth. A highly preferred
	are herein incorporated by	embodiment of the invention
	reference in its entirety.	includes a method for
	Endothelial cells that may be	stimulating apoptosis of
	used according to these assays	endothelial cells. An
	 are publicly available (e.g.,	alternative highly preferred
	through commercial sources).	embodiment of the invention
	Exemplary endothelial cells	includes a method for
	 that may be used according to	inhibiting (e.g., decreasing)
	these assays include bovine	apoptosis of endothelial cells.
	aortic endothelial cells	A highly preferred
	(bAEC), which are an example	embodiment of the invention
	 of endothelial cells which line	includes a method for
	 blood vessels and are involved	stimulating angiogenisis. An
	 in functions that include, but	alternative highly preferred
	 are not limited to,	embodiment of the invention
	angiogenesis, vascular	includes a method for
	permeability, vascular tone,	inhibiting angiogenesis. A
	and immune cell extravasation.	highly preferred embodiment
		of the invention includes a
		method for reducing cardiac

highly preferred embodiment
of the invention includes a method for inducing cardiac
hypertrophy. Highly
preferred indications include
neoplastic diseases (e.g., as
described below under
"Hyperproliferative
Disorders"), and disorders of
the cardiovascular system
(e.g., heart disease, congestive
heart failure, hypertension,
aortic stenosis,
cardiomyopathy, valvular
regurgitation, left ventricular
dysfunction, atherosclerosis
and atherosclerotic vascular
disease, diabetic nephropathy,
intracardiac shunt, cardiac
hypertrophy, myocardial
infarction, chronic
hemodynamic overload, and/or
as described below under
"Cardiovascular Disorders").
Highly preferred indications
include cardiovascular,
endothelial and/or angiogenic
disorders (e.g., systemic
disorders that affect vessels
such as diabetes mellitus, as
1

well as diseases of the vessels themselves, such as of the	arteries, capillaries, veins	and/or lymphatics). Highly	preferred are indications that	stimulate angiogenesis and/or	cardiovascularization. Highly	preferred are indications that	inhibit angiogenesis and/or	cardiovascularization.	Highly preferred indications	include antiangiogenic activity	to treat solid tumors,	leukemias, and Kaposi"s	sarcoma, and retinal disorders.	Highly preferred indications	include neoplasms and cancer,	such as, Kaposi"s sarcoma,	hemangioma (capillary and	cavernous), glomus tumors,	telangiectasia, bacillary	angiomatosis,	hemangioendothelioma,	angiosarcoma,	haemangiopericytoma,	lymphangioma,	lymphangiosarcoma. Highly	preferred indications also	include cancers such as,	prostate, breast, lung, colon,	pancreatic, esophageal,
						-						-																	

stomach, brain, liver, and urinary cancer. Preferred indications include benign dysproliferative disorders and	as, for example, hyperplasia, metaplasia, and/or dysplasia. Highly preferred indications also include arterial disease, such as, atherosclerosis,	hypertension, coronary artery disease, inflammatory vasculitides, Reynaud"s disease and Reynaud"s phenomenom, aneurysms, restenosis; venous and	lymphatic disorders such as thrombophlebitis, lymphangitis, and lymphedema; and other vascular disorders such as peripheral vascular disease, and cancer. Highly	preferred indications also include trauma such as wounds, burns, and injured tissue (e.g., vascular injury such as, injury resulting from balloon angioplasty, and atheroschlerotic lesions), implant fixation, scarring,

ischemia reperfusion iniury.
rheumatoid arthritis,
cerebrovascular disease, renal
diseases such as acute renal
failure, and osteoporosis.
 Additional highly preferred
indications include stroke,
graft rejection, diabetic or
other retinopathies, thrombotic
and coagulative disorders,
vascularitis, lymph
angiogenesis, sexual disorders,
age-related macular
degeneration, and treatment
/prevention of endometriosis
and related conditions.
Additional highly preferred
indications include fibromas,
heart disease, cardiac arrest,
heart valve disease, and
vascular disease. Preferred
indications include blood
disorders (e.g., as described
below under "Immune
Activity", "Blood-Related
Disorders", and/or
"Cardiovascular Disorders").
Preferred indications include
autoimmune diseases (e.g.,
rheumatoid arthritis, systemic
lupus erythematosis, multiple

sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Additional preferred indications include inflammation and inflammatory disorders (such as acute and chronic inflammatory diseases, e.g., inflammatory bowel disease and Crohn's disease), and pain management.		Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and inflammation and inflammatory disorders. Preferred indications also include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g.,
		This reporter assay measures activation of the NFAT signaling pathway in HMC-1 human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and
	IL-6 in HUVEC	Activation of transcription through NFAT response element in immune cells (such as mast cells).
	1440	1441
	HSDJJ82	HSDJL42
	492	493

	agonists or antagonists of the	rheumatoid arthritis, systemic
	invention) to regulate NFAT	lupus erythematosis, multiple
	transcription factors and	sclerosis and/or as described
	modulate expression of genes	below) and
	involved in	immunodeficiencies (e.g., as
	immunomodulatory functions.	described below). Preferred
	Exemplary assays for	indications include neoplastic
	transcription through the	diseases (e.g., leukemia,
	NFAT response element that	lymphoma, melanoma,
-	may be used or routinely	prostate, breast, lung, colon,
	modified to test NFAT-	pancreatic, esophageal,
	response element activity of	stomach, brain, liver, and
	polypeptides of the invention	urinary tract cancers and/or as
	(including antibodies and	described below under
	agonists or antagonists of the	"Hyperproliferative
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	indications include benign
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	Preferred indications include
	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia
	Hutchinson and McCloskey, J	(ALL), plasmacytomas,
	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
	16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
	al., J Exp Med 188:527-537	granulomatous disease,
	(1998), the contents of each of	inflammatory bowel disease,

			which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of	sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease.
HSDJL42	1441	ICAM in OE19		
HSDJM31	1442	Activation of Adipocyte ERK Signaling Pathway	Kinase assay. Kinase assays, for example an Elk-1 kinase assay. for ERK signal	A highly preferred embodiment of the invention includes a method for
			transduction that regulate cell proliferation or differentiation	stimulating adipocyte proliferation. An alternative
			are well known in the art and may be used or routinely	highly preferred embodiment of the invention includes a
			modified to assess the ability	method for inhibiting
			invention (including antibodies	ime
			and agonists or antagonists of	of the invention includes a
			the invention) to promote or inhibit cell proliferation,	method for stimulating adipocyte differentiation. An

		activation, and differentiation.	alternative highly preferred
		Exemplary assays for ERK	embodiment of the invention
		kinase activity that may be	includes a method for
		used or routinely modified to	inhibiting adipocyte
		test ERK kinase-induced	differentiation. A highly
		activity of polypeptides of the	preferred embodiment of the
		invention (including antibodies	invention includes a method
		and agonists or antagonists of	for stimulating (e.g.,
		the invention) include the	increasing) adipocyte
		assays disclosed in Forrer et	activation. An alternative
		al., Biol Chem 379(8-9):1101-	highly preferred embodiment
		1110 (1998); Le Marchand-	of the invention includes a
		Brustel Y, Exp Clin	method for inhibiting the
		Endocrinol Diabetes	activation of (e.g., decreasing)
		107(2):126-132 (1999);	and/or inactivating adipocytes.
		Kyriakis JM, Biochem Soc	Highly preferred indications
		Symp 64:29-48 (1999); Chang	include endocrine disorders
		and Karin, Nature	(e.g., as described below under
	_	410(6824):37-40 (2001); and	"Endocrine Disorders").
		Cobb MH, Prog Biophys Mol	Highly preferred indications
		Biol 71(3-4):479-500 (1999);	also include neoplastic
		the contents of each of which	diseases (e.g., lipomas,
		are herein incorporated by	liposarcomas, and/or as
•		reference in its entirety.	described below under
		Mouse adipocyte cells that	"Hyperproliferative
		may be used according to these	Disorders"). Preferred
		assays are publicly available	indications include blood
•		(e.g., through the ATCC).	disorders (e.g., hypertension,
		Exemplary mouse adipocyte	congestive heart failure, blood
		cells that may be used	vessel blockage, heart disease,
		according to these assays	stroke, impotence and/or as

		isolation and (e.g., as described below under dipocyte to "Immune Activity"), neural	der	ند	and infection (e.g., as described helow under	"Infectious Disease").	A highly preferred indication	is diabetes mellitus. An	additional highly preferred	indication is a complication	associated with diabetes (e.g.,	diabetic retinopathy, diabetic	nephropathy, kidney disease	(e.g., renal failure,	nephropathy and/or other	diseases and disorders as	described in the "Renal	Disorders" section below),	diabetic neuropathy, nerve	disease and nerve damage	(e.g., due to diabetic	neuropathy), blood vessel	blockage, heart disease, stroke,	1. 1. 1. 1. 1
include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a	continuous substrain of 3T3 fibroblast cells developed	through clonal isolation and undergo a pre-adipocyte to	adipose-like conversion under	conditions known in the art.																				

neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemichyperosmolar coma,	cardiovascular disease (e.g., heart disease, atherosclerosis, microvascular disease,	hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders"	section below), dyslipidemia, endocrine disorders (as described in the "Endocrine Disorders" section below),	neuropathy, vision impairment (e.g., diabetic retinopathy and blindness), ulcers and impaired wound healing, infection (e.g.,	disorders as described in the "Infectious Diseases" section below (particularly of the	additional highly preferred indication is obesity and/or complications associated with obesity. Additional highly	preferred indications include weight loss or alternatively.

weight gain. Additional highly preferred indications are complications associated with insulin resistance.	Additional highly preferred indications are disorders of the musculoskeletal systems including myopathies, muscular dystrophy, and/or as described herein.	Additional highly preferred indications include, hypertension, coronary artery disease, dyslipidemia, gallstones, osteoarthritis, decentrative orthritis, decentrative orthritis, entired	disorders, fibrosis, cachexia, and kidney diseases or disorders. Preferred indications include neoplasms and cancer, such as, lymphoma, leukemia and breast, colon, and kidney	cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer.  Highly preferred indications include lipomas and liposarcomas. Other preferred

					indications include benign dysproliferative disorders and pre-neoplastic conditions, such as, for example, hyperplasia, metaplasia, and/or dysplasia.
464	HSDJM31	1442	VEGF in SW480		
495	HSDSB09	1443	SEAP in 293/ISRE		
	HSDSB09	1443	Regulation of	Assays for the regulation of	A highly preferred indication
495			transcription via DMEF1 response	transcription through the DMEF1 response element are	is diabetes mellitus. Additional highly preferred
			element in	well-known in the art and may	indications include
			adipocytes and pre-	be used or routinely modified	complications associated with
			adipocytes	to assess the ability of	diabetes (e.g., diabetic
				polypeptides of the invention	retinopathy, diabetic
				(including antibodies and	nephropathy, kidney disease
				agonists or antagonists of the	(e.g., renal failure,
				invention) to activate the	nephropathy and/or other
				DMEF1 response element in a	diseases and disorders as
				reporter construct (such as that	described in the "Renal
				containing the GLUT4	Disorders" section below),
				promoter) and to regulate	diabetic neuropathy, nerve
				insulin production. The	disease and nerve damage
				DMEF1 response element is	(e.g., due to diabetic
				present in the GLUT4	neuropathy), blood vessel
				promoter and binds to MEF2	blockage, heart disease, stroke,
				transcription factor and another	impotence (e.g., due to diabetic
	-			transcription factor that is	neuropathy or blood vessel
				required for insulin regulation	blockage), seizures, mental
				of Glut4 expression in skeletal	confusion, drowsiness,

		_	
		muscle. GLUI4 is the primary	nonketotic hyperglycemic-
		insulin-responsive glucose	hyperosmolar coma,
		transporter in fat and muscle	cardiovascular disease (e.g.,
		tissue. Exemplary assays that	heart disease, atherosclerosis,
		may be used or routinely	microvascular disease,
		modified to test for DMEF1	hypertension, stroke, and other
		response element activity (in	diseases and disorders as
		adipocytes and pre-adipocytes)	described in the
		by polypeptides of the	"Cardiovascular Disorders"
		invention (including antibodies	section below), dyslipidemia,
		and agonists or antagonists of	endocrine disorders (as
		the invention) include assays	described in the "Endocrine
		disclosed inThai, M.V., et al., J	Disorders" section below),
		Biol Chem, 273(23):14285-92	neuropathy, vision impairment
		(1998); Mora, S., et al., J Biol	(e.g., diabetic retinopathy and
		Chem, 275(21):16323-8	blindness), ulcers and impaired
		(2000); Liu, M.L., et al., J Biol	wound healing, and infection
		Chem, 269(45):28514-21	(e.g., infectious diseases and
		(1994); "Identification of a 30-	disorders as described in the
		base pair regulatory element	"Infectious Diseases" section
		and novel DNA binding	below, especially of the
		protein that regulates the	urinary tract and skin). An
		human GLUT4 promoter in	additional highly preferred
		transgenic mice", J Biol Chem.	indication is obesity and/or
		2000 Aug 4;275(31):23666-73;	complications associated with
		Berger, et al., Gene 66:1-10	obesity. Additional highly
		(1988); and, Cullen, B., et al.,	preferred indications include
		Methods in Enzymol.	weight loss or alternatively,
		216:362–368 (1992), the	weight gain. Additional highly
•		contents of each of which is	preferred indications are
		herein incorporated by	complications associated with

				reference in its entirety.	insulin resistance.
				Adipocytes and pre-adipocytes	
				that may be used according to	
				these assays are publicly	
				available (e.g., through the	
				ATCC) and/or may be	
				routinely generated.	
				Exemplary cells that may be	
				used according to these assays	
				include the mouse 3T3-L1 cell	
				line which is an adherent	
				mouse preadipocyte cell line.	
				Mouse 3T3-L1 cells are a	
				continuous substrain of 3T3	
				fibroblasts developed through	
				clonal isolation. These cells	
				undergo a pre-adipocyte to	
				adipose-like conversion under	
				appropriate differentiation	
				culture conditions.	
	HSDSB09	1443	Activation of	Assays for the activation of	A highly preferred indication
495			transcription	transcription through the	is obesity and/or complications
			through cAMP	cAMP response element are	associated with obesity.
			response element	well-known in the art and may	Additional highly preferred
			(CRE) in pre-	be used or routinely modified	indications include weight loss
			adipocytes.	to assess the ability of	or alternatively, weight gain.
				polypeptides of the invention	An additional highly preferred
				(including antibodies and	indication is diabetes mellitus.
				agonists or antagonists of the	An additional highly preferred
				invention) to increase cAMP,	indication is a complication
				regulate CREB transcription	associated with diabetes (e.g.,

factor	factors, and modulate	diabetic retinopathy, diabetic
expres	expression of genes involved	nephropathy, kidney disease
ināw	in a wide variety of cell	(e.g., renal failure,
functi	functions. For example, a	nephropathy and/or other
3T3-L	3T3-L1/CRE reporter assay	diseases and disorders as
may b	may be used to identify factors	described in the "Renal
that ac	that activate the cAMP	Disorders" section below),
signal	signaling pathway. CREB	diabetic neuropathy, nerve
plays	plays a major role in	disease and nerve damage
adipo	adipogenesis, and is involved	(e.g., due to diabetic
in diff	in differentiation into	neuropathy), blood vessel
adipoc	adipocytes. CRE contains the	blockage, heart disease, stroke,
bindir	binding sequence for the	impotence (e.g., due to diabetic
transc	transcription factor CREB	neuropathy or blood vessel
(CRE	(CRE binding protein).	blockage), seizures, mental
Exem	Exemplary assays for	confusion, drowsiness,
transc	transcription through the	nonketotic hyperglycemic-
	cAMP response element that	hyperosmolar coma,
may b	may be used or routinely	cardiovascular disease (e.g.,
Imodif.	modified to test cAMP-	heart disease, atherosclerosis,
respor	response element activity of	microvascular disease,
polype	polypeptides of the invention	hypertension, stroke, and other
(inclu	(including antibodies and	diseases and disorders as
agonis	agonists or antagonists of the	described in the
invent	invention) include assays	"Cardiovascular Disorders"
disclo	disclosed in Berger et al., Gene	section below), dyslipidemia,
1-1:99	66:1-10 (1998); Cullen and	endocrine disorders (as
Malm	Malm, Methods in Enzymol	described in the "Endocrine
216:3	216:362-368 (1992); Henthorn	Disorders" section below),
et al.,	et al., Proc Natl Acad Sci USA	neuropathy, vision impairment
85:63	85:6342-6346 (1988); Reusch	(e.g., diabetic retinopathy and

				et al Mol Cell Biol	blindness), ulcers and impaired
				20(3):1008-1020 (2000); and	wound healing, and infection
-				Klemm et al., J Biol Chem	(e.g., infectious diseases and
				273:917-923 (1998), the	disorders as described in the
				contents of each of which are	"Infectious Diseases" section
				herein incorporated by	below, especially of the
				reference in its entirety. Pre-	urinary tract and skin), carpal
				adipocytes that may be used	tunnel syndrome and
				according to these assays are	Dupuytren's contracture).
				publicly available (e.g.,	Additional highly preferred
				through the ATCC) and/or	indications are complications
				may be routinely generated.	associated with insulin
				Exemplary mouse adipocyte	resistance.
				cells that may be used	
				according to these assays	
				include 3T3-L1 cells. 3T3-L1	
				is an adherent mouse	
				preadipocyte cell line that is a	
				continuous substrain of 3T3	
				fibroblast cells developed	
				through clonal isolation and	
				undergo a pre-adipocyte to	
				adipose-like conversion under	
				appropriate differentiation	
				conditions known in the art.	
	HSDSB09	1443	Activation of	Assays for the activation of	A highly preferred indication
495			transcription	transcription through the	is obesity and/or complications
			through serum	Serum Response Element	associated with obesity.
			response element in	(SRE) are well-known in the	Additional highly preferred
			pre-adipocytes.	art and may be used or	indications include weight loss
				routinely modified to assess	or alternatively, weight gain.

		the ability of polypeptides of	An additional highly preferred
		the invention (including	indication is diabetes mellitus.
		antibodies and agonists or	An additional highly preferred
		antagonists of the invention) to	indication is a complication
		regulate the serum response	associated with diabetes (e.g.,
		factors and modulate the	diabetic retinopathy, diabetic
		expression of genes involved	nephropathy, kidney disease
		in growth. Exemplary assays	(e.g., renal failure,
		for transcription through the	nephropathy and/or other
		SRE that may be used or	diseases and disorders as
		routinely modified to test SRE	described in the "Renal
		activity of the polypeptides of	Disorders" section below),
		the invention (including	diabetic neuropathy, nerve
		antibodies and agonists or	disease and nerve damage
		antagonists of the invention)	(e.g., due to diabetic
		include assays disclosed in	neuropathy), blood vessel
		Berger et al., Gene 66:1-10	blockage, heart disease, stroke,
-	-	(1998); Cullen and Malm,	impotence (e.g., due to diabetic
		Methods in Enzymol 216:362-	neuropathy or blood vessel
		368 (1992); Henthorn et al.,	blockage), seizures, mental
		Proc Natl Acad Sci USA	confusion, drowsiness,
		85:6342-6346 (1988); and	nonketotic hyperglycemic-
		Black et al., Virus Genes	hyperosmolar coma,
		12(2):105-117 (1997), the	cardiovascular disease (e.g.,
		content of each of which are	heart disease, atherosclerosis,
		herein incorporated by	microvascular disease,
		reference in its entirety. Pre-	hypertension, stroke, and other
		adipocytes that may be used	diseases and disorders as
		according to these assays are	described in the
		publicly available (e.g.,	"Cardiovascular Disorders"
		through the ATCC) and/or	section below), dyslipidemia,

				may be routinely generated.	endocrine disorders (as
				Exemplary mouse adipocyte	described in the "Endocrine
				cells that may be used	Disorders" section below),
				according to these assays	neuropathy, vision impairment
				include 3T3-L1 cells. 3T3-L1	(e.g., diabetic retinopathy and
				is an adherent mouse	blindness), ulcers and impaired
				preadipocyte cell line that is a	wound healing, and infection
				continuous substrain of 3T3	(e.g., infectious diseases and
				fibroblast cells developed	disorders as described in the
				through clonal isolation and	"Infectious Diseases" section
				undergo a pre-adipocyte to	below). Additional highly
				adipose-like conversion under	preferred indications are
				appropriate differentiation	complications associated with
				conditions known in the art.	insulin resistance.
	HSDSB09	1443	SEAP in Alk Phos		
9 495			C2C12		
	HSDSB09	1443	Activation of	Assays for the activation of	A preferred embodiment of
495			transcription	transcription through the	the invention includes a
			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha
			immune cells (such	art and may be used or	production. An alternative
			as T-cells).	routinely modified to assess	preferred embodiment of the
				the ability of polypeptides of	invention includes a method
-				the invention (including	for stimulating (e.g.,
				antibodies and agonists or	increasing) TNF alpha
				antagonists of the invention) to	production. Preferred
				regulate the serum response	indications include blood
				factors and modulate the	disorders (e.g., as described
				expression of genes involved	below under "Immune
				in growth. Exemplary assays	Activity", "Blood-Related
				for transcription through the	Disorders", and/or

																											_		
"Cardiovascular Disorders"), Highly preferred indications	include autoimmune diseases	(e.g., rheumatoid arthritis,	systemic lupus erythematosis,	Crohn"s disease, multiple	sclerosis and/or as described	below), immunodeficiencies	(e.g., as described below),	boosting a T cell-mediated	immune response, and	suppressing a T cell-mediated	immune response. Additional	highly preferred indications	include inflammation and	inflammatory disorders, and	treating joint damage in	patients with rheumatoid	arthritis. An additional highly	preferred indication is sepsis.	Highly preferred indications	include neoplastic diseases	(e.g., leukemia, lymphoma,	and/or as described below	under "Hyperproliferative	Disorders"). Additionally,	highly preferred indications	include neoplasms and	cancers, such as, for example,	leukemia, lymphoma,	melanoma, glioma (e.g.,
SRE that may be used or routinely modified to test SRE	activity of the polypeptides of	the invention (including	antibodies and agonists or	antagonists of the invention)	include assays disclosed in	Berger et al., Gene 66:1-10	(1998); Cullen and Malm,	Methods in Enzymol 216:362-	368 (1992); Henthorn et al.,	Proc Natl Acad Sci USA	85:6342-6346 (1988); and	Black et al., Virus Genes	12(2):105-117 (1997), the	content of each of which are	herein incorporated by	reference in its entirety. T	cells that may be used	according to these assays are	publicly available (e.g.,	through the ATCC).	Exemplary mouse T cells that	may be used according to these	assays include the CTLL cell	line, which is an IL-2	dependent suspension culture	of T cells with cytotoxic	activity.		
					-								-																
			_																										

malignant glioma), solid	tumors, and prostate, breast,	lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other	preferred indications include	benign dysproliferative	disorders and pre-neoplastic	conditions, such as, for	example, hyperplasia,	metaplasia, and/or dysplasia.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,	Hodgkin's disease, acute	lymphocytic anemia (ALL),	plasmacytomas, multiple	myeloma, Burkitt's lymphoma,	arthritis, AIDS, granulomatous	disease, inflammatory bowel	disease, neutropenia,	neutrophilia, psoriasis,	suppression of immune	reactions to transplanted	organs and tissues,	hemophilia, hypercoagulation,	diabetes mellitus, endocarditis,	meningitis, Lyme Disease,	cardiac reperfusion injury, and	asthma and allergy. An	additional preferred indication
														•			-													

		-		is infection (e.g., an infectious disease as described below under "Infectious Disease").
HSDSB09	1443	Regulation of transcription of	Assays for the regulation of transcription of Malic Enzyme	A highly preferred indication is diabetes mellitus.
		Malic Enzyme in	are well-known in the art and	An additional highly preferred indication is a complication
		confooding	modified to assess the ability	associated with diabetes (e.g.,
			of polypeptides of the	diabetic retinopathy, diabetic
			invention (including antibodies	nephropathy, kidney disease
			and agonists or antagonists of	(e.g., renal failure,
			the invention) to regulate	nephropathy and/or other
			transcription of Malic Enzyme,	diseases and disorders as
			a key enzyme in lipogenesis.	described in the "Renal
			Malic enzyme is involved in	Disorders" section below),
			lipogenesisand its expression is	diabetic neuropathy, nerve
			stimulted by insulin. ME	disease and nerve damage
			promoter contains two direct	(e.g., due to diabetic
			repeat (DR1)- like elements	neuropathy), blood vessel
			MEp and MEd identified as	blockage, heart disease, stroke,
			putative PPAR response	impotence (e.g., due to diabetic
			elements. ME promoter may	neuropathy or blood vessel
			also responds to AP1 and other	blockage), seizures, mental
			transcription factors.	confusion, drowsiness,
			Exemplary assays that may be	nonketotic hyperglycemic-
			used or routinely modified to	hyperosmolar coma,
			test for regulation of	cardiovascular disease (e.g.,
			transcription of Malic Enzyme	heart disease, atherosclerosis,
			(in adipoocytes) by	microvascular disease,
			polypeptides of the invention	hypertension, stroke, and other
			(including antibodies and	diseases and disorders as

				agonists or antagonists of the	described in the
				invention) include assays	"Cardiovascular Disorders"
•				disclosed in: Streeper, R.S., et	section below), dyslipidemia,
				al., Mol Endocrinol,	endocrine disorders (as
				12(11):1778-91 (1998);	described in the "Endocrine
NA APIZ GEN AN				Garcia-Jimenez, C., et al., Mol	Disorders" section below),
				Endocrinol, 8(10):1361-9	neuropathy, vision impairment
				(1994); Barroso, I., et al., J	(e.g., diabetic retinopathy and
				Biol Chem, 274(25):17997-	blindness), ulcers and impaired
				8004 (1999); Ijpenberg, A., et	wound healing, and infection
				al., J Biol Chem,	(e.g., infectious diseases and
				272(32):20108-20117 (1997);	disorders as described in the
				Berger, et al., Gene 66:1-10	"Infectious Diseases" section
				(1988); and, Cullen, B., et al.,	below, especially of the
				Methods in Enzymol.	urinary tract and skin), carpal
				216:362–368 (1992), the	tunnel syndrome and
				contents of each of which is	Dupuytren's contracture).
				herein incorporated by	An additional highly preferred
				reference in its entirety.	indication is obesity and/or
			-	Hepatocytes that may be used	complications associated with
				according to these assays are	obesity. Additional highly
				publicly available (e.g.,	preferred indications include
				through the ATCC) and/or	weight loss or alternatively,
				may be routinely generated.	weight gain. Aditional
				Exemplary hepatocytes that	highly preferred indications are
				may be used according to these	complications associated with
_				assays includes the H4IIE rat	insulin resistance.
				liver hepatoma cell line.	
495	HSDSB09	1443	SEAP in HIB/CRE		
	HSDSB09	1443	Stimulation of	Assavs for measuring calcium	A highly preferred

495	Calcium Flux in	flux are well-known in the art	indication is diabetes mellitus.
	pancreatic beta	and may be used or routinely	An additional highly preferred
	cells.	modified to assess the ability	indication is a complication
		of polypeptides of the	associated with diabetes (e.g.,
	-	invention (including antibodies	diabetic retinopathy, diabetic
		and agonists or antagonists of	nephropathy, kidney disease
		the invention) to mobilize	(e.g., renal failure,
		calcium. For example, the	nephropathy and/or other
		FLPR assay may be used to	diseases and disorders as
		measure influx of calcium.	described in the "Renal
		Cells normally have very low	Disorders" section below),
		concentrations of cytosolic	diabetic neuropathy, nerve
		calcium compared to much	disease and nerve damage
		higher extracellular calcium.	(e.g., due to diabetic
		Extracellular factors can cause	neuropathy), blood vessel
28		an influx of calcium, leading to	blockage, heart disease, stroke,
65		activation of calcium	impotence (e.g., due to diabetic
		responsive signaling pathways	neuropathy or blood vessel
		and alterations in cell	blockage), seizures, mental
		functions. Exemplary assays	confusion, drowsiness,
		that may be used or routinely	nonketotic hyperglycemic-
		modified to measure calcium	hyperosmolar coma,
		flux by polypeptides of the	cardiovascular disease (e.g.,
		invention (including antibodies	heart disease, atherosclerosis,
		and agonists or antagonists of	microvascular disease,
		the invention) include assays	hypertension, stroke, and other
		disclosed in: Satin LS, et al.,	diseases and disorders as
		Endocrinology, 136(10):4589-	described in the
		601 (1995); Mogami H, et al.,	"Cardiovascular Disorders"
		Endocrinology, 136(7):2960-6	section below), dyslipidemia,
		(1995); Richardson SB, et al.,	endocrine disorders (as

	Biochem J. 288 (Pt 3):847-51	described in the "Endocrine
	(1992); and, Meats, JE, et al.,	Disorders" section below),
	Cell Calcium 1989 Nov-	neuropathy, vision impairment
	Dec;10(8):535-41 (1989), the	(e.g., diabetic retinopathy and
	contents of each of which is	blindness), ulcers and impaired
	herein incorporated by	wound healing, and infection
	reference in its entirety.	(e.g., infectious diseases and
	Pancreatic cells that may be	disorders as described in the
	used according to these assays	"Infectious Diseases" section
	are publicly available (e.g.,	below, especially of the
	through the ATCC) and/or	urinary tract and skin), carpal
	may be routinely generated.	tunnel syndrome and
	Exemplary pancreatic cells that	Dupuytren's contracture).
	may be used according to these	An additional highly preferred
	assays include HITT15 Cells.	indication is obesity and/or
	HITT15 are an adherent	complications associated with
	epithelial cell line established	obesity. Additional highly
	from Syrian hamster islet cells	preferred indications include
	transformed with SV40. These	weight loss or alternatively,
	cells express glucagon,	weight gain. Aditional
	somatostatin, and	highly preferred indications are
	glucocorticoid receptors. The	complications associated with
	cells secrete insulin, which is	insulin resistance.
	stimulated by glucose and	
	glucagon and suppressed by	
	somatostatin or	
	glucocorticoids. ATTC# CRL-	
	1777 Refs: Lord and	
	Ashcroft. Biochem. J. 219:	
	547-551; Santerre et al. Proc.	
	Natl. Acad. Sci. USA 78:	

		,		4339-4343, 1981.	
	HSDSB09	1443	Activation of	This reporter assay measures	Highly preferred indications
495			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the GATA3 response	Preferred indications also
				element are well-known in the	include blood disorders (e.g.,
				art and may be used or	as described below under
				routinely modified to assess	"Immune Activity", "Blood-
				the ability of polypeptides of	Related Disorders", and/or
				the invention (including	"Cardiovascular Disorders").
				antibodies and agonists or	Preferred indications include
				antagonists of the invention) to	autoimmune diseases (e.g.,
				regulate GATA3 transcription	rheumatoid arthritis, systemic
				factors and modulate	lupus erythematosis, multiple
				expression of mast cell genes	sclerosis and/or as described
				important for immune response	below) and
				development. Exemplary	immunodeficiencies (e.g., as
				assays for transcription	described below). Preferred
				through the GATA3 response	indications include neoplastic
				element that may be used or	diseases (e.g., leukemia,
				routinely modified to test	lymphoma, melanoma,
				GATA3-response element	prostate, breast, lung, colon,
				activity of polypeptides of the	pancreatic, esophageal,
				invention (including antibodies	stomach, brain, liver, and
				and agonists or antagonists of	urinary tract cancers and/or as

	the invention) include assays	described below under
	disclosed in Berger et al., Gene	"Hyperproliferative
	66:1-10 (1998); Cullen and	Disorders"). Other preferred
	Malm, Methods in Enzymol	indications include benign
	216:362-368 (1992); Henthorn	dysproliferative disorders and
	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
	Quant Biol 64:563-571 (1999);	Preferred indications include
	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
	J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
	(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
	Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
	14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
	contents of each of which are	lymphoma, arthritis, AIDS,
	herein incorporated by	granulomatous disease,
	reference in its entirety. Mast	inflammatory bowel disease,
	cells that may be used	sepsis, neutropenia,
	according to these assays are	neutrophilia, psoriasis,
	publicly available (e.g.,	suppression of immune
	through the ATCC).	reactions to transplanted
	Exemplary human mast cells	organs and tissues, hemophilia,
	that may be used according to	hypercoagulation, diabetes
	these assays include the HMC-	mellitus, endocarditis,
	1 cell line, which is an	meningitis, and Lyme Disease.
	immature human mast cell line	
	established from the peripheral	
	blood of a patient with mast	
	cell leukemia, and exhibits	
	many characteristics of	

				immature mast cells.	
	HSDSB09	1443	Activation of	This reporter assay measures	Highly preferred indications
495			transcription	activation of the NFAT	include allergy, asthma, and
			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
		****		cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the Nuclear Factor of	Preferred indications also
				Activated T cells (NFAT)	include blood disorders (e.g.,
				response element are well-	as described below under
				known in the art and may be	"Immune Activity", "Blood-
				used or routinely modified to	Related Disorders", and/or
				assess the ability of	"Cardiovascular Disorders").
				polypeptides of the invention	Preferred indications include
	•			(including antibodies and	autoimmune diseases (e.g.,
				agonists or antagonists of the	rheumatoid arthritis, systemic
				invention) to regulate NFAT	lupus erythematosis, multiple
				transcription factors and	sclerosis and/or as described
				modulate expression of genes	below) and
				involved in	immunodeficiencies (e.g., as
				immunomodulatory functions.	described below). Preferred
				Exemplary assays for	indications include neoplastic
				transcription through the	diseases (e.g., leukemia,
				NFAT response element that	lymphoma, melanoma,
				may be used or routinely	prostate, breast, lung, colon,
				modified to test NFAT-	pancreatic, esophageal,
				response element activity of	stomach, brain, liver, and
				polypeptides of the invention	urinary tract cancers and/or as

		1 -1 -1	1. 11. 1.
		(including antibodies and	described below under
		agonists or antagonists of the	"Hyperproliferative
		invention) include assays	Disorders"). Other preferred
		disclosed in Berger et al., Gene	indications include benign
		66:1-10 (1998); Cullen and	dysproliferative disorders and
		Malm, Methods in Enzymol	pre-neoplastic conditions, such
		216:362-368 (1992); Henthorn	as, for example, hyperplasia,
		et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
		85:6342-6346 (1988); De Boer	Preferred indications include
		et al., Int J Biochem Cell Biol	anemia, pancytopenia,
		31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
		et al., J Immunol	leukemias, Hodgkin's disease,
		165(12):7215-7223 (2000);	acute lymphocytic anemia
		Hutchinson and McCloskey, J	(ALL), plasmacytomas,
		Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
		16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
		al., J Exp Med 188:527-537	granulomatous disease,
		(1998), the contents of each of	inflammatory bowel disease,
		which are herein incorporated	sepsis, neutropenia,
	-	by reference in its entirety.	neutrophilia, psoriasis,
		Mast cells that may be used	suppression of immune
		according to these assays are	reactions to transplanted
		publicly available (e.g.,	organs and tissues, hemophilia,
		through the ATCC).	hypercoagulation, diabetes
		Exemplary human mast cells	mellitus, endocarditis,
		that may be used according to	meningitis, and Lyme Disease.
		these assays include the HMC-	
		1 cell line, which is an	
		immature human mast cell line	
		established from the peripheral	
		blood of a patient with mast	

				cell leukemia, and exhibits	
				many characteristics of immature mast cells.	
	HSDSB09	1443	Activation of	This reporter assay measures	Highly preferred indication
495			transcription	activation of the NFkB	includes allergy, asthma, and
			through NFKB	signaling pathway in HMC-1	rhinitis. Additional highly
			response element in	human mast cell line.	preferred indications include
			immune cells (such	Activation of NFkB in mast	infection (e.g., an infectious
			as mast cells).	cells has been linked to	disease as described below
				production of certain	under "Infectious Disease"),
				cytokines, such as IL-6 and IL-	and inflammation and
				9. Assays for the activation of	inflammatory disorders.
				transcription through the	Preferred indications include
				NFKB response element are	immunological and
				well-known in the art and may	hempatopoietic disorders (e.g.,
				be used or routinely modified	as described below under
				to assess the ability of	"Immune Activity", and
				polypeptides of the invention	"Blood-Related Disorders").
				(including antibodies and	Preferred indications also
				agonists or antagonists of the	include autoimmune diseases
				invention) to regulate NFKB	(e.g., rheumatoid arthritis,
				transcription factors and	systemic lupus erythematosis,
				modulate expression of	multiple sclerosis and/or as
				immunomodulatory genes.	described below) and
				Exemplary assays for	immunodeficiencies (e.g., as
				transcription through the	described below). Preferred
				NFKB response element that	indications also include
				may be used or rountinely	neoplastic diseases (e.g.,
				modified to test NFKB-	leukemia, lymphoma,
				response element activity of	melanoma, and/or as described
				polypeptides of the invention	below under

			(including antibodies and	"Hyperproliferative
			agonists or antagonists of the	Disorders"). Preferred
			invention) include assays	indications include neoplasms
			disclosed in Berger et al., Gene	and cancer, such as, for
	-		66:1-10 (1998); Cullen and	example, leukemia, lymphoma,
			Malm, Methods in Enzymol	melanoma, and prostate,
			216:362-368 (1992); Henthorn	breast, lung, colon, pancreatic,
			et al., Proc Natl Acad Sci USA	esophageal, stomach, brain,
			85:6342-6346 (1988); Stassen	liver, urinary tract cancers and
-			et al, J Immunol 166(7):4391-8	as described below under
			(2001); and Marquardt and	"Hyperproliferative
			Walker, J Allergy Clin	Disorders".
			Immunol 105(3):500-5 (2000),	
			the contents of each of which	
	<del></del>		are herein incorporated by	
			reference in its entirety. Mast	
			cells that may be used	
			according to these assays are	
			publicly available (e.g.,	
			through the ATCC).	
-			Exemplary human mast cells	
			that may be used according to	
			these assays include the HMC-	
			1 cell line, which is an	
			immature human mast cell line	
			established from the peripheral	
			blood of a patient with mast	
			cell leukemia, and exhibits	
			many characteristics of	
			immature mast cells.	
HSDSB09	1443	Activation of	Assays for the activation of	Highly preferred indications

495		transcription	transcription through the	include allergy, asthma, and
		through STAT6	Signal Transducers and	rhinitis. Additional highly
		response element in	Activators of Transcription	preferred indications include
		immune cells (such	(STAT6) response element in	infection (e.g., an infectious
		as mast cells).	immune cells (such as in the	disease as described below
			human HMC-1 mast cell line)	under "Infectious Disease"),
			are well-known in the art and	and inflammation and
			may be used or routinely	inflammatory disorders.
			modified to assess the ability	Preferred indications also
			of polypeptides of the	include hematopoietic and
			invention (including antibodies	immunological disorders (e.g.,
			and agonists or antagonists of	as described below under
			the invention) to regulate	"Immune Activity", "Blood-
	_		STAT6 transcription factors	Related Disorders", and/or
			and modulate the expression of	"Cardiovascular Disorders"),
20			multiple genes. Exemplary	autoimmune diseases (e.g.,
			assays for transcription	rheumatoid arthritis, systemic
			through the STAT6 response	lupus erythematosis, multiple
			element that may be used or	sclerosis and/or as described
			routinely modified to test	below), and
			STAT6 response element	immunodeficiencies (e.g., as
			activity of the polypeptides of	described below). Preferred
			the invention (including	indications include neoplastic
			antibodies and agonists or	diseases (e.g., leukemia,
			antagonists of the invention)	lymphoma, melanoma, and/or
			include assays disclosed in	as described below under
			Berger et al., Gene 66:1-10	"Hyperproliferative
			(1998); Cullen and Malm,	Disorders"). Preferred
			Methods in Enzymol 216:362-	indications include neoplasms
			368 (1992); Henthorn et al.,	and cancer, such as, for
			Proc Natl Acad Sci USA	example, leukemia, lymphoma,

				85:6342-6346 (1988);	melanoma, and prostate,
				Sherman, Immunol Rev	breast, lung, colon, pancreatic,
				179:48-56 (2001); Malaviya	esophageal, stomach, brain,
				and Uckun, J Immunol	liver and urinary cancer. Other
				168:421-426 (2002); Masuda	preferred indications include
				et al., J Biol Chem	benign dysproliferative
				275(38):29331-29337 (2000);	disorders and pre-neoplastic
				and Masuda et al., J Biol Chem	conditions, such as, for
				276:26107-26113 (2001), the	example, hyperplasia,
				contents of each of which are	metaplasia, and/or dysplasia.
				herein incorporated by	Preferred indications include
				reference in its entirety. Mast	hematopoietic and
				cells that may be used	immunological disorders such
				according to these assays are	as arthritis, AIDS,
				publicly available (e.g.,	granulomatous disease,
				through the ATCC).	inflammatory bowel disease,
				Exemplary human mast cells	sepsis, neutropenia,
				that may be used according to	neutrophilia, psoriasis,
				these assays include the HMC-	suppression of immune
				1 cell line, which is an	reactions to transplanted
				immature human mast cell line	organs and tissues, hemophilia,
				established from the peripheral	hypercoagulation, diabetes
_				blood of a patient with mast	mellitus, endocarditis,
				cell leukemia, and exhibits	meningitis, and Lyme Disease.
				many characteristics of	
				immature mast cells.	
495	HSDSB09	1443	CXCR4 in HT1080		
495	HSDSB09	1443	IgG in Human B cells		
	HSDSB09	1443	IgG in Human B		
	The second secon				

495			cells SAC		
	HSDSB09	1443	Stimulation of	Assays for measuring secretion	A highly preferred
495			insulin secretion	of insulin are well-known in	indication is diabetes mellitus.
			from pancreatic	the art and may be used or	An additional highly preferred
			beta cells.	routinely modified to assess	indication is a complication
-				the ability of polypeptides of	associated with diabetes (e.g.,
				the invention (including	diabetic retinopathy, diabetic
				antibodies and agonists or	nephropathy, kidney disease
				antagonists of the invention) to	(e.g., renal failure,
				stimulate insulin secretion.	nephropathy and/or other
				For example, insulin secretion	diseases and disorders as
				is measured by FMAT using	described in the "Renal
				anti-rat insulin antibodies.	Disorders" section below),
				Insulin secretion from	diabetic neuropathy, nerve
				pancreatic beta cells is	disease and nerve damage
				upregulated by glucose and	(e.g., due to diabetic
				also by certain	neuropathy), blood vessel
				proteins/peptides, and	blockage, heart disease, stroke,
				disregulation is a key	impotence (e.g., due to diabetic
				component in diabetes.	neuropathy or blood vessel
				Exemplary assays that may be	blockage), seizures, mental
				used or routinely modified to	confusion, drowsiness,
				test for stimulation of insulin	nonketotic hyperglycemic-
				secretion (from pancreatic	hyperosmolar coma,
				cells) by polypeptides of the	cardiovascular disease (e.g.,
				invention (including antibodies	heart disease, atherosclerosis,
				and agonists or antagonists of	microvascular disease,
				the invention) include assays	hypertension, stroke, and other
				disclosed in: Ahren, B., et al.,	diseases and disorders as
				Am J Physiol, 277(4 Pt	described in the
				2):R959-66 (1999); Li, M., et	"Cardiovascular Disorders"

				al Endocrinology	section below) dyslinidemia
				138(9):3735-40 (1997): Kim	endocrine disorders (as
				KH et al FFBS Lett	described in the "Endocrine
				377(2):237-9 (1995): and.	Disorders" section below).
				Miraglia S et. al., Journal of	neuropathy, vision impairment
				Biomolecular Screening,	(e.g., diabetic retinopathy and
				4:193-204 (1999), the contents	blindness), ulcers and impaired
				of each of which is herein	wound healing, and infection
				incorporated by reference in its	(e.g., infectious diseases and
				entirety. Pancreatic cells that	disorders as described in the
				may be used according to these	"Infectious Diseases" section
				assays are publicly available	below, especially of the
				(e.g., through the ATCC)	urinary tract and skin), carpal
				and/or may be routinely	tunnel syndrome and
				generated. Exemplary	Dupuytren's contracture).
				pancreatic cells that may be	An additional highly preferred
				used according to these assays	indication is obesity and/or
				include rat INS-1 cells. INS-1	complications associated with
				cells are a semi-adherent cell	obesity. Additional highly
				line established from cells	preferred indications include
				isolated from an X-ray induced	weight loss or alternatively,
				rat transplantable insulinoma.	weight gain. Aditional
		-		These cells retain	highly preferred indications are
				characteristics typical of native	complications associated with
				pancreatic beta cells including	insulin resistance.
				glucose inducible insulin	
				secretion. References: Asfari	
				et al. Endocrinology 1992	
				130:16/.	
495	HSDSB09	1443	SEAP in Jurkat/IL4		
			promoter		

	HSDSB09	1443	SEAP in Jurkat/IL4		
495			promoter (antiCD3 co-stim)		
	HSDSB09	1443	Activation of	This reporter assay measures	Highly preferred indication
495			transcription	activation of the NFkB	includes allergy, asthma, and
			through NFKB	signaling pathway in Ku812	rhinitis. Additional highly
			response element in	human basophil cell line.	preferred indications include
			immune cells (such	Assays for the activation of	infection (e.g., an infectious
			as basophils).	transcription through the	disease as described below
				NFKB response element are	under "Infectious Disease"),
				well-known in the art and may	and inflammation and
				be used or routinely modified	inflammatory disorders.
				to assess the ability of	Preferred indications include
				polypeptides of the invention	immunological and
				(including antibodies and	hempatopoietic disorders (e.g.,
				agonists or antagonists of the	as described below under
				invention) to regulate NFKB	"Immune Activity", and
				transcription factors and	"Blood-Related Disorders").
				modulate expression of	Preferred indications also
				immunomodulatory genes.	include autoimmune diseases
				Exemplary assays for	(e.g., rheumatoid arthritis,
				transcription through the	systemic lupus erythematosis,
				NFKB response element that	multiple sclerosis and/or as
				may be used or rountinely	described below) and
				modified to test NFKB-	immunodeficiencies (e.g., as
				response element activity of	described below). Preferred
				polypeptides of the invention	indications also include
				(including antibodies and	neoplastic diseases (e.g.,
				agonists or antagonists of the	leukemia, lymphoma,
				invention) include assays	melanoma, and/or as described
				disclosed in Berger et al., Gene	below under

				66:1-10 (1998); Cullen and	"Hyperproliferative
				Malm, Methods in Enzymol	Disorders"). Preferred
				216:362-368 (1992); Henthorn	indications include neoplasms
				et al., Proc Natl Acad Sci USA	and cancer, such as, for
				85:6342-6346 (1988); Marone	example, leukemia, lymphoma,
				et al, Int Arch Allergy	melanoma, and prostate,
				Immunol 114(3):207-17	breast, lung, colon, pancreatic,
				(1997), the contents of each of	esophageal, stomach, brain,
				which are herein incorporated	liver, urinary tract cancers and
				by reference in its entirety.	as described below under
				Basophils that may be used	"Hyperproliferative
				according to these assays are	Disorders".
				publicly available (e.g.,	
				through the ATCC).	
				Exemplary human basophil	
				cell lines that may be used	
				according to these assays	
				include Ku812, originally	
				established from a patient with	
				chronic myelogenous	
				leukemia. It is an immature	
				prebasophilic cell line that can	
				be induced to differentiate into	
	HSDSB09	1443	SEAP in		
495			Ku812/NFkB (TNF		
			synergy)		
	HSDSB09	1443	Activation of	Assays for the activation of	A preferred embodiment of
495			transcription	transcription through the	the invention includes a
			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha

	immune cells (such	art and may be used or	production. An alternative
	as natural killer	routinely modified to assess	highly preferred embodiment
	cells).	the ability of polypeptides of	of the invention includes a
		the invention (including	method for stimulating (e.g.,
		antibodies and agonists or	increasing) TNF alpha
		antagonists of the invention) to	production. Preferred
		regulate serum response	indications include blood
		factors and modulate the	disorders (e.g., as described
		expression of genes involved	below under "Immune
		in growth and upregulate the	Activity", "Blood-Related
		function of growth-related	Disorders", and/or
		genes in many cell types.	"Cardiovascular Disorders"),
		Exemplary assays for	Highly preferred indications
		transcription through the SRE	include autoimmune diseases
		that may be used or routinely	(e.g., rheumatoid arthritis,
		modified to test SRE activity	systemic lupus erythematosis,
		of the polypeptides of the	Crohn"s disease, multiple
		invention (including antibodies	sclerosis and/or as described
		and agonists or antagonists of	below), immunodeficiencies
		the invention) include assays	(e.g., as described below),
		disclosed in Berger et al., Gene	boosting a T cell-mediated
		66:1-10 (1998); Cullen and	immune response, and
		Malm, Methods in Enzymol	suppressing a T cell-mediated
		216:362-368 (1992); Henthorn	immune response. Additional
		et al., Proc Natl Acad Sci USA	highly preferred indications
_		85:6342-6346 (1988); Benson	include inflammation and
		et al., J Immunol 153(9):3862-	inflammatory disorders, and
		3873 (1994); and Black et al.,	treating joint damage in
		Virus Genes 12(2):105-117	patients with rheumatoid
		(1997), the content of each of	arthritis. An additional highly
		which are herein incorporated	preferred indication is sepsis.

by reference in its entirety. T	Highly preferred indications
cells that may be used	include neoplastic diseases
according to these assays are	(e.g., leukemia, lymphoma,
publicly available (e.g.,	and/or as described below
through the ATCC).	under "Hyperproliferative
 Exemplary T cells that may be	Disorders"). Additionally,
used according to these assays	highly preferred indications
include the NK-YT cell line,	include neoplasms and
which is a human natural killer	cancers, such as, for example,
cell line with cytolytic and	leukemia, lymphoma,
cytotoxic activity.	melanoma, glioma (e.g.,
	malignant glioma), solid
	tumors, and prostate, breast,
	lung, colon, pancreatic,
	esophageal, stomach, brain,
	liver and urinary cancer. Other
	preferred indications include
	benign dysproliferative
	disorders and pre-neoplastic
	conditions, such as, for
	example, hyperplasia,
	metaplasia, and/or dysplasia.
	Preferred indications include
	anemia, pancytopenia,
	leukopenia, thrombocytopenia,
	Hodgkin's disease, acute
	lymphocytic anemia (ALL),
	plasmacytomas, multiple
	myeloma, Burkitt's lymphoma,
	arthritis, AIDS, granulomatous
	disease, inflammatory bowel

					discontinua social
					discase, ileduopenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues, hemophilia,
					hypercoagulation, diabetes
					mellitus, endocarditis,
		-			meningitis, Lyme Disease,
					cardiac reperfusion injury, and
_					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HSDSB09	1443	Activation of	Assays for the activation of	A highly preferred
495			transcription	transcription through the	indication is allergy.
			through STAT6	Signal Transducers and	Another highly preferred
			response element in	Activators of Transcription	indication is asthma.
			immune cells (such	(STAT6) response element are	Additional highly preferred
			as T-cells).	well-known in the art and may	indications include
				be used or routinely modified	inflammation and
				to assess the ability of	inflammatory disorders.
				polypeptides of the invention	Preferred indications include
				(including antibodies and	blood disorders (e.g., as
				agonists or antagonists of the	described below under
				invention) to regulate STAT6	"Immune Activity", "Blood-
				transcription factors and	Related Disorders", and/or
				modulate the expression of	"Cardiovascular Disorders").
				multiple genes. Exemplary	Preferred indications include
				assays for transcription	autoimmune diseases (e.g.,
				through the STAT6 response	rheumatoid arthritis, systemic

			element that may be used or	lunus erythematosis multiple
			routinely modified to test	sclerosis and/or as described
			STAT6 response element	helow) and
			activity of the polypeptides of	immunodeficiencies (e.g., as
			the invention (including	described below).
-			antibodies and agonists or	Preferred indications include
		-	antagonists of the invention)	neoplastic diseases (e.g.,
			include assays disclosed in	leukemia, lymphoma,
			Berger et al., Gene 66:1-10	melanoma, and/or as described
			(1998); Cullen and Malm,	below under
			Methods in Enzymol 216:362-	"Hyperproliferative
			368 (1992); Henthorn et al.,	Disorders"). Preferred
			Proc Natl Acad Sci USA	indications include neoplasms
			85:6342-6346 (1988); Georas	and cancers, such as, leukemia,
			et al., Blood 92(12):4529-4538	lymphoma, melanoma, and
			(1998); Moffatt et al.,	prostate, breast, lung, colon,
			Transplantation 69(7):1521-	pancreatic, esophageal,
			1523 (2000); Curiel et al., Eur	stomach, brain, liver and
			J Immunol 27(8):1982-1987	urinary cancer. Other preferred
			(1997); and Masuda et al., J	indications include benign
			Biol Chem 275(38):29331-	dysproliferative disorders and
			29337 (2000), the contents of	pre-neoplastic conditions, such
-			each of which are herein	as, for example, hyperplasia,
			incorporated by reference in its	metaplasia, and/or dysplasia.
			entirety. T cells that may be	Preferred indications include
			used according to these assays	anemia, pancytopenia,
			are publicly available (e.g.,	leukopenia, thrombocytopenia,
			through the ATCC).	Hodgkin's disease, acute
			Exemplary T cells that may be	lymphocytic anemia (ALL),
			used according to these assays	plasmacytomas, multiple
	i		include the SUPT cell line,	myeloma, Burkitt's lymphoma,

				which is a suspension culture of IL-2 and IL-4 responsive T cells.	arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, disperse mellitus, endocarditis
					meningitis, and Lyme Disease. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
495	HSDSB09	1443	CXCR4 in SW480		
496	HSDSE75	1444	Myoblast cell proliferation	Assays for muscle cell proliferation are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to stimulate or inhibit myoblast cell proliferation. Exemplary assays for myoblast cell proliferation that may be used or routinely modified to test activity of polypeptides and	Highly preferred indications include diabetes, myopathy, muscle cell atrophy, cancers of muscle (such as, rhabdomyoma, and rhabdosarcoma), cardiovascular disorders (such as congestive heart failure, cachexia, myxomas, fibromas, congenital cardiovascular abnormalities, heart valve disease, vascular disease, and also as described below under

"Cardiovascular Disorders"), stimulating myoblast	proliferation, and inhibiting	myoblast proliferation.																											
antibodies of the invention (including agonists or	antagonists of the invention)	include, for example, assays	disclosed in: Soeta, C., et al.	"Possible role for the c-ski	gene in the proliferation of	myogenic cells in regenerating	skeletal muscles of rats" Dev	Growth Differ Apr;43(2):155-	64 (2001); Ewton DZ, et al.,	"IGF binding proteins-4, -5	and -6 may play specialized	roles during L6 myoblast	proliferation and	differentiation" J Endocrinol	Mar;144(3):539-53 (1995);	and, Pampusch MS, et	al.,"Effect of transforming	growth factor beta on	proliferation of L6 and	embryonic porcine myogenic	cells" J Cell Physiol	Jun;143(3):524-8 (1990); the	contents of each of which are	herein incorporated by	reference in their entirety.	Exemplary myoblast cells that	may be used according to these	assays include the rat myoblast	L6 cell line. Rat myoblast L6

				cells are an adherent rat	
				myoblast cell line, isolated	
				from primary cultures of rat	
				thigh muscle, that fuse to form	
				multinucleated myotubes and	
N				striated fibers after culture in	
				differentiation media.	
	HSDSE75	1444	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
496				by T cells and has strong	embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced	stimulating (e.g., increasing)
				IgE production and increases	IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a
				IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,
				Deregulated expression of IL-6	reducing) IL-6 production. A
				has been linked to autoimmune	highly preferrred indication is
				disease, plasmacytomas,	the stimulation or enhancement
				myelomas, and chronic	of mucosal immunity. Highly
				hyperproliferative diseases.	preferred indications include
				Assays for immunomodulatory	blood disorders (e.g., as
				and differentiation factor	described below under
				proteins produced by a large	"Immune Activity", "Blood-
				variety of cells where the	Related Disorders", and/or
				expression level is strongly	"Cardiovascular Disorders"),
				regulated by cytokines, growth	and infection (e.g., as
				factors, and hormones are well	described below under
				known in the art and may be	"Infectious Disease"). Highly
				used or routinely modified to	preferred indications include
				assess the ability of	autoimmune diseases (e.g.,
				polypeptides of the invention	rheumatoid arthritis, systemic

	(including antibodies and	lupus erythematosis, multiple
	agonists or antagonists of the	sclerosis and/or as described
	invention) to mediate	below) and
	immunomodulation and	immunodeficiencies (e.g., as
	differentiation and modulate T	described below). Highly
	cell proliferation and function.	preferred indications also
	Exemplary assays that test for	include boosting a B cell-
	immunomodulatory proteins	mediated immune response
	evaluate the production of	and alternatively suppressing a
	cytokines, such as IL-6, and	B cell-mediated immune
-	the stimulation and	response. Highly preferred
	upregulation of T cell	indications include
	proliferation and functional	inflammation and
	activities. Such assays that	inflammatory
	may be used or routinely	disorders.Additional highly
	modified to test	preferred indications include
	immunomodulatory and	asthma and allergy. Highly
	diffferentiation activity of	preferred indications include
	polypeptides of the invention	neoplastic diseases (e.g.,
	(including antibodies and	myeloma, plasmacytoma,
	agonists or antagonists of the	leukemia, lymphoma,
	invention) include assays	melanoma, and/or as described
	disclosed in Miraglia et al., J	below under
	Biomolecular Screening 4:193-	"Hyperproliferative
	204(1999); Rowland et al.,	Disorders"). Highly preferred
	"Lymphocytes: a practical	indications include neoplasms
	approach" Chapter 6:138-160	and cancers, such as, myeloma,
	(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
	Immunol 158:2919-2925	lymphoma, melanoma, and
	(1997), the contents of each of	prostate, breast, lung, colon,
	which are herein incorporated	pancreatic, esophageal,

				by reference in its entirety.	stomach, brain, liver and
				Human dendritic cells that may	urinary cancer. Other preferred
				be used according to these	indications include benign
				assays may be isolated using	dysproliferative disorders and
				techniques disclosed herein or	pre-neoplastic conditions, such
				otherwise known in the art.	as, for example, hyperplasia,
				Human dendritic cells are	metaplasia, and/or dysplasia.
				antigen presenting cells in	Preferred indications include
				suspension culture, which,	anemia, pancytopenia,
				when activated by antigen	leukopenia, thrombocytopenia,
				and/or cytokines, initiate and	Hodgkin's disease, acute
				upregulate T cell proliferation	lymphocytic anemia (ALL),
				and functional activities.	multiple myeloma, Burkitt's
					lymphoma, arthritis, AIDS,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, neutropenia,
	-				neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, and Lyme Disease.
					An additonal preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
497	HSDZR57	1445	SEAP in Alk Phos C2C12		

	HSDZR57	1445	SEAP in ATP-3T3-		
497			L1		
	HSDZR57	1445	Activation of	Kinase assay. JNK and p38	A highly preferred
497			Endothelial Cell	kinase assays for signal	embodiment of the invention
			p38 or JNK	transduction that regulate cell	includes a method for
			Signaling Pathway.	proliferation, activation, or	stimulating endothelial cell
				apoptosis are well known in	growth. An alternative highly
				the art and may be used or	preferred embodiment of the
				routinely modified to assess	invention includes a method
				the ability of polypeptides of	for inhibiting endothelial cell
				the invention (including	growth. A highly preferred
				antibodies and agonists or	embodiment of the invention
				antagonists of the invention) to	includes a method for
				promote or inhibit cell	stimulating endothelial cell
				proliferation, activation, and	proliferation. An alternative
				apoptosis. Exemplary assays	highly preferred embodiment
				for JNK and p38 kinase	of the invention includes a
				activity that may be used or	method for inhibiting
				routinely modified to test JNK	endothelial cell proliferation.
				and p38 kinase-induced	A highly preferred
				activity of polypeptides of the	embodiment of the invention
				invention (including antibodies	includes a method for
				and agonists or antagonists of	stimulating apoptosis of
				the invention) include the	endothelial cells. An
				assays disclosed in Forrer et	alternative highly preferred
				al., Biol Chem 379(8-9):1101-	embodiment of the invention
				1110 (1998); Gupta et al., Exp	includes a method for
				Cell Res 247(2): 495-504	inhibiting (e.g., decreasing)
				(1999); Kyriakis JM, Biochem	apoptosis of endothelial cells.
				Soc Symp 64:29-48 (1999);	A highly preferred
				Chang and Karin, Nature	embodiment of the invention

[4]	410(6824):37-40 (2001); and	includes a method for
	Cobb MH, Prog Biophys Mol	stimulating (e.g., increasing)
<u>B</u>	Biol 71(3-4):479-500 (1999);	endothelial cell activation. An
th th	the contents of each of which	alternative highly preferred
ar	are herein incorporated by	embodiment of the invention
re	reference in its entirety.	includes a method for
<u> </u>	Endothelial cells that may be	inhibiting (e.g., decreasing) the
Sin	used according to these assays	activation of and/or
ar	are publicly available (e.g.,	inactivating endothelial cells.
th the second se	through the ATCC).	A highly preferred
<u> </u>	Exemplary endothelial cells	embodiment of the invention
th	that may be used according to	includes a method for
th	these assays include human	stimulating angiogenisis. An
In	umbilical vein endothelial cells	alternative highly preferred
1)	(HUVEC), which are	embodiment of the invention
er	endothelial cells which line	includes a method for
9/	venous blood vessels, and are	inhibiting angiogenesis. A
ui.	involved in functions that	highly preferred embodiment
ui	include, but are not limited to,	of the invention includes a
ar	angiogenesis, vascular	method for reducing cardiac
<u>pe</u>	permeability, vascular tone,	hypertrophy. An alternative
ar	and immune cell extravasation.	highly preferred embodiment
		of the invention includes a
		method for inducing cardiac
		hypertrophy. Highly
		preferred indications include
		neoplastic diseases (e.g., as
		described below under
		"Hyperproliferative
		Disorders"), and disorders of
		the cardiovascular system

(e.g., heart disease, congestive	heart failure, hypertension,	aortic stenosis,	cardiomyopathy, valvular	regurgitation, left ventricular	dysfunction, atherosclerosis	and atherosclerotic vascular	disease, diabetic nephropathy,	intracardiac shunt, cardiac	hypertrophy, myocardial	infarction, chronic	hemodynamic overload, and/or	as described below under	"Cardiovascular Disorders").	Highly preferred indications	include cardiovascular,	endothelial and/or angiogenic	disorders (e.g., systemic	disorders that affect vessels	such as diabetes mellitus, as	well as diseases of the vessels	themselves, such as of the	arteries, capillaries, veins	and/or lymphatics). Highly	preferred are indications that	stimulate angiogenesis and/or	cardiovascularization. Highly	preferred are indications that	inhibit angiogenesis and/or	cardiovascularization.	Highly preferred indications
																		-												

		include antiangiogenic activity
		include annualigit genie activity
	1	to treat solid tumors,
		leukemias, and Kaposi"s
	 83	sarcoma, and retinal disorders.
		Highly preferred indications
		include neoplasms and cancer,
	 	such as, Kaposi"s sarcoma,
		hemangioma (capillary and
	<u> </u>	cavernous), glomus tumors,
	<b>+</b>	telangiectasia, bacillary
		angiomatosis,
		hemangioendothelioma,
	8	angiosarcoma,
		haemangiopericytoma,
		lymphangioma,
		lymphangiosarcoma. Highly
		preferred indications also
	<u></u>	include cancers such as,
	<u></u>	prostate, breast, lung, colon,
	 	pancreatic, esophageal,
	8	stomach, brain, liver, and
		urinary cancer. Preferred
	<del></del>	indications include benign
		dysproliferative disorders and
		pre-neoplastic conditions, such
-		as, for example, hyperplasia,
	<u> </u>	metaplasia, and/or dysplasia.
		Highly preferred indications
	-	also include arterial disease,
	S	such as, atherosclerosis,
		hypertension, coronary artery

disease, inflammatory	vasculitides, Reynaud"s	disease and Reynaud''s	phenomenom, aneurysms,	restenosis; venous and	Iymphatic disorders such as	thrombophlebitis,	Iymphangitis, and	lymphedema; and other	vascular disorders such as	peripheral vascular disease,	and cancer. Highly	preferred indications also	include trauma such as	wounds, burns, and injured	tissue (e.g., vascular injury	such as, injury resulting from	balloon angioplasty, and	atheroschlerotic lesions),	implant fixation, scarring,	ischemia reperfusion injury,	rheumatoid arthritis,	cerebrovascular disease, renal	diseases such as acute renal	failure, and osteoporosis.	Additional highly preferred	indications include stroke,	graft rejection, diabetic or	other retinopathies, thrombotic	and coagulative disorders,	_

age-related macular degeneration, and treatment /prevention of endometriosis and related conditions. Additional highly preferred indications include fibromas,	heart disease, cardiac arrest, heart valve disease, and vascular disease. Preferred indications include blood disorders (e.g., as described below under	Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple	sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Additional preferred indications include inflammation and inflammatory disorders (such as acute and chronic	inflammatory diseases, e.g., inflammatory bowel disease and Crohn's disease), and pain

					management.
	HSHAX21	1446	Activation of	Kinase assay. Kinase assays,	A highly preferred
498			Adipocyte ERK	for example an Elk-1 kinase	embodiment of the invention
			Signaling Pathway	assay, for ERK signal	includes a method for
				transduction that regulate cell	stimulating adipocyte
				proliferation or differentiation	proliferation. An alternative
				are well known in the art and	highly preferred embodiment
				may be used or routinely	of the invention includes a
				modified to assess the ability	method for inhibiting
				of polypeptides of the	adipocyte proliferation. A
				invention (including antibodies	highly preferred embodiment
				and agonists or antagonists of	of the invention includes a
				the invention) to promote or	method for stimulating
				inhibit cell proliferation,	adipocyte differentiation. An
				activation, and differentiation.	alternative highly preferred
				Exemplary assays for ERK	embodiment of the invention
				kinase activity that may be	includes a method for
				used or routinely modified to	inhibiting adipocyte
			_	test ERK kinase-induced	differentiation. A highly
				activity of polypeptides of the	preferred embodiment of the
				invention (including antibodies	invention includes a method
				and agonists or antagonists of	for stimulating (e.g.,
				the invention) include the	increasing) adipocyte
				assays disclosed in Forrer et	activation. An alternative
				al., Biol Chem 379(8-9):1101-	highly preferred embodiment
				1110 (1998); Le Marchand-	of the invention includes a
				Brustel Y, Exp Clin	method for inhibiting the
				Endocrinol Diabetes	activation of (e.g., decreasing)
				107(2):126-132 (1999);	and/or inactivating adipocytes.
				Kyriakis JM, Biochem Soc	Highly preferred indications
				Symp 64:29-48 (1999); Chang	include endocrine disorders

		and Karin. Nature	(e.g., as described below under
		410(6824):37-40 (2001); and	"Endocrine Disorders").
		Cobb MH, Prog Biophys Mol	Highly preferred indications
		Biol 71(3-4):479-500 (1999);	also include neoplastic
		the contents of each of which	diseases (e.g., lipomas,
		are herein incorporated by	liposarcomas, and/or as
		reference in its entirety.	described below under
		Mouse adipocyte cells that	"Hyperproliferative
		may be used according to these	Disorders"). Preferred
		assays are publicly available	indications include blood
-		(e.g., through the ATCC).	disorders (e.g., hypertension,
		Exemplary mouse adipocyte	congestive heart failure, blood
		cells that may be used	vessel blockage, heart disease,
		according to these assays	stroke, impotence and/or as
		include 3T3-L1 cells. 3T3-L1	described below under
		is an adherent mouse	"Immune Activity",
		preadipocyte cell line that is a	"Cardiovascular Disorders",
		continuous substrain of 3T3	and/or "Blood-Related
		fibroblast cells developed	Disorders"), immune disorders
		through clonal isolation and	(e.g., as described below under
		undergo a pre-adipocyte to	"Immune Activity"), neural
		adipose-like conversion under	disorders (e.g., as described
		appropriate differentiation	below under "Neural Activity
		conditions known in the art.	and Neurological Diseases"),
	-		and infection (e.g., as
			described below under
			"Infectious Disease").
			A highly preferred indication
			is diabetes mellitus. An
			additional highly preferred
			indication is a complication

		associated with diabetes (e.g.,
		diabetic retinopathy, diabetic
		nephropathy, kidney disease
		(e.g., renal failure,
		nephropathy and/or other
		diseases and disorders as
		described in the "Renal
-		Disorders" section below),
		diabetic neuropathy, nerve
		disease and nerve damage
		(e.g., due to diabetic
		neuropathy), blood vessel
		blockage, heart disease, stroke,
		impotence (e.g., due to diabetic
		neuropathy or blood vessel
		blockage), seizures, mental
		confusion, drowsiness,
		nonketotic hyperglycemic-
100		hyperosmolar coma,
		cardiovascular disease (e.g.,
		heart disease, atherosclerosis,
		microvascular disease,
		hypertension, stroke, and other
		diseases and disorders as
		described in the
	•	"Cardiovascular Disorders"
		section below), dyslipidemia,
		endocrine disorders (as
		described in the "Endocrine
		Disorders" section below),
		neuropathy, vision impairment

(e.g., diabetic retinopathy and
blindness), ulcers and impaired
wound healing, infection (e.g.,
infectious diseases and
disorders as described in the
"Infectious Diseases" section
below (particularly of the
urinary tract and skin). An
additional highly preferred
indication is obesity and/or
complications associated with
obesity. Additional highly
preferred indications include
weight loss or alternatively,
weight gain. Additional
highly preferred indications are
complications associated with
insulin resistance.
Additional highly preferred
indications are disorders of the
musculoskeletal systems
including myopathies,
muscular dystrophy, and/or as
described herein.
Additional highly preferred
indications include,
hypertension, coronary artery
disease, dyslipidemia,
gallstones, osteoarthritis,
degenerative arthritis, eating
disorders, fibrosis, cachexia,

HSHAX21				disorders. Preferred indications include neoplasms and cancer, such as, lymphoma, leukemia and breast, colon, and kidney cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				indications include neoplasms and cancer, such as, lymphoma, leukemia and breast, colon, and kidney cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				and cancer, such as, lymphoma, leukemia and breast, colon, and kidney cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				lymphoma, leukemia and breast, colon, and kidney cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				breast, colon, and kidney cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				cancer. Additional preferred indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				indications include melanoma, prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				prostate, lung, pancreatic, esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				esophageal, stomach, brain, liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21	·			liver, and urinary cancer. Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				Highly preferred indications include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				include lipomas and liposarcomas. Other preferred indications include benign
HSHAX21				liposarcomas. Other preferred indications include benign
HSHAX21				indications include benign
HSHAX21				
HSHAX21		_		dysproliferative disorders and
HSHAX21				pre-neoplastic conditions, such
HSHAX21	_			as, for example, hyperplasia,
HSHAX21				metaplasia, and/or dysplasia.
	1446	Production of	MIP-1alpha FMAT. Assays	A highly preferred
498		MIP1alpha	for immunomodulatory	embodiment of the invention
			proteins produced by activated	includes a method for
			dendritic cells that upregulate	stimulating MIP1a production.
			monocyte/macrophage and T	An alternative highly preferred
			cell chemotaxis are well	embodiment of the invention
			known in the art and may be	includes a method for
			used or routinely modified to	inhibiting (e.g., reducing)
			assess the ability of	MIP1a production. A highly
			polypeptides of the invention	preferred indication is
-			(including antibodies and	infection (e.g., an infectious
	_		agonists or antagonists of the	disease as described below

	invention) to mediate	under "Infectious Disease").
	immunomodulation, modulate	Preferred indications include
	chemotaxis, and modulate T	blood disorders (e.g., as
	cell differentiation. Exemplary	described below under
 	assays that test for	"Immune Activity", "Blood-
	immunomodulatory proteins	Related Disorders", and/or
	evaluate the production of	"Cardiovascular Disorders").
 _	chemokines, such as	Highly preferred indications
	macrophage inflammatory	include autoimmune diseases
	protein 1 alpha (MIP-1a), and	(e.g., rheumatoid arthritis,
	the activation of	systemic lupus erythematosis,
	monocytes/macrophages and T	multiple sclerosis and/or as
	cells. Such assays that may be	described below) and
	used or routinely modified to	immunodeficiencies (e.g., as
 	test immunomodulatory and	described below). Additional
	chemotaxis activity of	highly preferred indications
	polypeptides of the invention	include inflammation and
	(including antibodies and	inflammatory disorders.
	agonists or antagonists of the	Preferred indications also
	invention) include assays	include anemia, pancytopenia,
	disclosed in Miraglia et al., J	leukopenia, thrombocytopenia,
	Biomolecular Screening 4:193-	Hodgkin's disease, acute
	204(1999); Rowland et al.,	lymphocytic anemia (ALL),
	"Lymphocytes: a practical	plasmacytomas, multiple
	approach" Chapter 6:138-160	myeloma, Burkitt's lymphoma,
	(2000); Satthaporn and	arthritis, AIDS, granulomatous
	Eremin, J R Coll Surg Ednb	disease, inflammatory bowel
	45(1):9-19 (2001); Drakes et	disease, sepsis, neutropenia,
	al., Transp Immunol 8(1):17-	neutrophilia, psoriasis,
	29 (2000); Verhasselt et al., J	suppression of immune
	Immunol 158: 2919-2925	reactions to transplanted

				(1997); and Nardelli et al., J	organs and tissues, hemophilia,
				Leukoc Biol 65:822-828	hypercoagulation, diabetes
				(1999), the contents of each of	mellitus, endocarditis,
				which are herein incorporated	meningitis, Lyme Disease,
				by reference in its entirety.	asthma, and allergy.
				Human dendritic cells that may	Preferred indications also
				be used according to these	include neoplastic diseases
-				assays may be isolated using	(e.g., leukemia, lymphoma,
				techniques disclosed herein or	and/or as described below
				otherwise known in the art.	under "Hyperproliferative
				Human dendritic cells are	Disorders"). Highly preferred
				antigen presenting cells in	indications include neoplasms
				suspension culture, which,	and cancers, such as, leukemia,
				when activated by antigen	lymphoma, prostate, breast,
				and/or cytokines, initiate and	lung, colon, pancreatic,
				upregulate T cell proliferation	esophageal, stomach, brain,
				and functional activities.	liver, and urinary cancer. Other
					preferred indications include
					benign dysproliferative
					disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
		ļ			metaplasia, and/or dysplasia.
	HSHAX21	1446	Production of TNF	TNFa FMAT. Assays for	A highly preferred
498			alpha by dendritic	immunomodulatory proteins	embodiment of the invention
			cells	produced by activated	includes a method for
				macrophages, T cells,	inhibiting (e.g., decreasing)
				fibroblasts, smooth muscle,	TNF alpha production. An
				and other cell types that exert a	alternative highly preferred
				wide variety of inflammatory	embodiment of the invention
				and cytotoxic effects on a	includes a method for

		discussion (2 cm included)
	valiety of cells are well known	Stilliniatilig (c.g., illercasilig)
	 in the art and may be used or	INF alpha production.
	routinely modified to assess	Highly preferred indications
	the ability of polypeptides of	include blood disorders (e.g.,
	the invention (including	as described below under
	antibodies and agonists or	"Immune Activity", "Blood-
	antagonists of the invention) to	Related Disorders", and/or
	mediate immunomodulation,	"Cardiovascular Disorders"),
	modulate inflammation and	Highly preferred indications
	cytotoxicity. Exemplary	include autoimmune diseases
	assays that test for	(e.g., rheumatoid arthritis,
	immunomodulatory proteins	systemic lupus erythematosis,
	evaluate the production of	Crohn"s disease, multiple
	cytokines such as tumor	sclerosis and/or as described
	necrosis factor alpha (TNFa),	below), immunodeficiencies
_	and the induction or inhibition	(e.g., as described below),
	of an inflammatory or	boosting a T cell-mediated
	cytotoxic response. Such	immune response, and
	 assays that may be used or	suppressing a T cell-mediated
	routinely modified to test	immune response. Additional
	immunomodulatory activity of	highly preferred indications
	polypeptides of the invention	include inflammation and
	(including antibodies and	inflammatory disorders, and
	agonists or antagonists of the	treating joint damage in
	invention) include assays	patients with rheumatoid
	 disclosed in Miraglia et al., J	arthritis. An additional highly
	Biomolecular Screening 4:193-	preferred indication is sepsis.
	204(1999); Rowland et al.,	Highly preferred indications
	"Lymphocytes: a practical	include neoplastic diseases
	approach" Chapter 6:138-160	(e.g., leukemia, lymphoma,
	(2000); Verhasselt et al., Eur J	and/or as described below

	Immunol 28(11):3886-3890	under "Hyperproliferative
	(1198); Dahlen et al., J	Disorders"). Additionally,
	Immunol 160(7):3585-3593	highly preferred indications
	(1998); Verhasselt et al., J	include neoplasms and
	Immunol 158:2919-2925	cancers, such as, leukemia,
	(1997); and Nardelli et al., J	lymphoma, melanoma, glioma
	Leukoc Biol 65:822-828	(e.g., malignant glioma), solid
	(1999), the contents of each of	tumors, and prostate, breast,
	which are herein incorporated	lung, colon, pancreatic,
	by reference in its entirety.	esophageal, stomach, brain,
	Human dendritic cells that may	liver and urinary cancer. Other
	be used according to these	preferred indications include
	assays may be isolated using	benign dysproliferative
	techniques disclosed herein or	disorders and pre-neoplastic
	otherwise known in the art.	conditions, such as, for
	Human dendritic cells are	example, hyperplasia,
	antigen presenting cells in	metaplasia, and/or dysplasia.
	suspension culture, which,	Preferred indications include
	when activated by antigen	anemia, pancytopenia,
	and/or cytokines, initiate and	leukopenia, thrombocytopenia,
	upregulate T cell proliferation	Hodgkin's disease, acute
	and functional activities.	lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		arthritis, AIDS, granulomatous
		disease, inflammatory bowel
		disease, neutropenia,
		neutrophilia, psoriasis,
		suppression of immune
		reactions to transplanted
		organs and tissues,

					hemonahilia hynercoagulation
					diabetes mellitus, endocarditis.
					meningitis. Lyme Disease.
					cardiac reperfusion injury, and
-					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
	HSHAX21	1446	Activation of	Assays for the activation of	Highly preferred indications
498			transcription	transcription through the	include inflammation and
			through NFKB	NFKB response element are	inflammatory disorders.
			response element in	well-known in the art and may	Highly preferred indications
			immune cells (such	be used or routinely modified	include blood disorders (e.g.,
			as T-cells).	to assess the ability of	as described below under
				polypeptides of the invention	"Immune Activity", "Blood-
				(including antibodies and	Related Disorders", and/or
				agonists or antagonists of the	"Cardiovascular Disorders").
				invention) to regulate NFKB	Highly preferred indications
				transcription factors and	include autoimmune diseases
				modulate expression of	(e.g., rheumatoid arthritis,
				immunomodulatory genes.	systemic lupus erythematosis,
				Exemplary assays for	multiple sclerosis and/or as
				transcription through the	described below), and
				NFKB response element that	immunodeficiencies (e.g., as
				may be used or rountinely	described below). An
				modified to test NFKB-	additional highly preferred
				response element activity of	indication is infection (e.g.,
-				polypeptides of the invention	AIDS, and/or an infectious
				(including antibodies and	disease as described below
				agonists or antagonists of the	under "Infectious Disease").

mivention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); Black et al., Virus Gnes 15(2):105-117 (1997); and Fraser et al., 29(3):838-844 (1999), the contents of each of which are herein incorporated by reference in its entirety. Exemplary human T cells, such as the MOLT4, that may be used according to these assays are publicly available (e.g., through the ATCC).
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HSIAS17 1447 Production of IL-6 FMAT. IL-6 is produced a reactions to transplanted organs, asthma and allergy.  HSIAS17 1447 Production of IL-6 FMAT. IL-6 is produced a practicipate in IL-4 induced a literation of firmulane reactions to transplanted organs, asthma and allergy.  HSIAS17 1447 Production of IL-6 FMAT. IL-6 is produced a practicipate in IL-4 induced a literation of firmulane of firmulane of the invention of the invention includes a nethod for inmunity. It is production and increases infinial preferred enhodiment of the invention includes a IL-6 induces cytotoxic T cells.  Deregulated expression of IL-6 production. An alternative disease, plasmacytomas, myeloms, and ethonic and increase plasmacytomas, and ethonic and and differentiation is disease, plasmacytomas, and ethonic expression of IL-6 production. A plate of proteins produced by a large produced by a lar						neutrophilia psoriasis
HSIAS17 14.6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced IgE production and increases IgA production and increases IgA production (IgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Dergulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						Louisabillo brusanossaniotica
HSIAS17 Production of IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced lgE production and increases lgA production (IgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						nemopnilia, nypercoagulation,
HSIAS17 Production of IL-6 IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced lgE production and increases lgA production and increases lgA production (IgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyporproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						diabetes mellitus, endocarditis,
HSIAS17 Production of IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced lgE production and increases lgA production and increases lgA production (IgA plays a role in mucosal immunity).  IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						meningitis, Lyme Disease,
HSIAS17 Production of IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced lgE production and increases lgA production and increases lgA production (IgA plays a role in mucosal immunity).  IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						suppression of immune
HSIAS17 1447 Production of IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced IgE production and increases IgA production and increases IgA production and increases IgA production and increases IgA production independing in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						reactions to transplanted
HSIAS17 1447 Production of IL-6 FMAT. IL-6 is produced by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced IgE production and increases IgA production (IgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention						organs, asthma and allergy.
by T cells and has strong effects on B cells. IL-6 participates in IL-4 induced lgE production and increases lgA production (lgA plays a role in mucosal immunity). IL-6 induces cytotoxic T cells. Deregulated expression of IL-6 has been linked to autoimmune disease, plasmacytomas, myelomas, and chronic hyperproliferative diseases. Assays for immunomodulatory and differentiation factor proteins produced by a large variety of cells where the expression level is strongly regulated by cytokines, growth factors, and hormones are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention		HSIAS17	1447	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
	499				by T cells and has strong	embodiment of the invention
					effects on B cells. IL-6	includes a method for
					participates in IL-4 induced	stimulating (e.g., increasing)
					IgE production and increases	IL-6 production. An alternative
					IgA production (IgA plays a	highly preferred embodiment
					role in mucosal immunity).	of the invention includes a
					IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,
					Deregulated expression of IL-6	reducing) IL-6 production. A
					has been linked to autoimmune	highly preferrred indication is
					disease, plasmacytomas,	the stimulation or enhancement
					myelomas, and chronic	of mucosal immunity. Highly
					hyperproliferative diseases.	preferred indications include
					Assays for immunomodulatory	blood disorders (e.g., as
					and differentiation factor	described below under
					proteins produced by a large	"Immune Activity", "Blood-
					variety of cells where the	Related Disorders", and/or
					expression level is strongly	"Cardiovascular Disorders"),
=					regulated by cytokines, growth	and infection (e.g., as
					factors, and hormones are well	described below under
					known in the art and may be	"Infectious Disease"). Highly
					used or routinely modified to	preferred indications include
					assess the ability of	autoimmune diseases (e.g.,
					polypeptides of the invention	rheumatoid arthritis, systemic

		(including antibodies and	lupus erythematosis, multiple
		agonists or antagonists of the	sclerosis and/or as described
		invention) to mediate	below) and
		immunomodulation and	immunodeficiencies (e.g., as
		differentiation and modulate T	described below). Highly
		cell proliferation and function.	preferred indications also
		Exemplary assays that test for	include boosting a B cell-
		immunomodulatory proteins	mediated immune response
		evaluate the production of	and alternatively suppressing a
		cytokines, such as IL-6, and	B cell-mediated immune
		the stimulation and	response. Highly preferred
-		upregulation of T cell	indications include
		proliferation and functional	inflammation and
		activities. Such assays that	inflammatory
		may be used or routinely	disorders.Additional highly
		modified to test	preferred indications include
		immunomodulatory and	asthma and allergy. Highly
-		diffferentiation activity of	preferred indications include
		polypeptides of the invention	neoplastic diseases (e.g.,
		(including antibodies and	myeloma, plasmacytoma,
		agonists or antagonists of the	leukemia, lymphoma,
		invention) include assays	melanoma, and/or as described
		disclosed in Miraglia et al., J	below under
		Biomolecular Screening 4:193-	"Hyperproliferative
		204(1999); Rowland et al.,	Disorders"). Highly preferred
		"Lymphocytes: a practical	indications include neoplasms
		approach" Chapter 6:138-160	and cancers, such as, myeloma,
		(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
		Immunol 158:2919-2925	lymphoma, melanoma, and
		(1997), the contents of each of	prostate, breast, lung, colon,
	-	which are herein incorporated	pancreatic, esophageal,

				by reference in its entirety.	stomach, brain, liver and
				Human dendritic cells that may	urinary cancer. Other preferred
				be used according to these	indications include benign
				assays may be isolated using	dysproliferative disorders and
				techniques disclosed herein or	pre-neoplastic conditions, such
				otherwise known in the art.	as, for example, hyperplasia,
				Human dendritic cells are	metaplasia, and/or dysplasia.
				antigen presenting cells in	Preferred indications include
				suspension culture, which,	anemia, pancytopenia,
				when activated by antigen	leukopenia, thrombocytopenia,
				and/or cytokines, initiate and	Hodgkin's disease, acute
				upregulate T cell proliferation	lymphocytic anemia (ALL),
				and functional activities.	multiple myeloma, Burkitt's
					lymphoma, arthritis, AIDS,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, and Lyme Disease.
					An additonal preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
	HSIAS17	1447	Production of TNF	TNFa FMAT. Assays for	A highly preferred
499			alpha by dendritic	immunomodulatory proteins	embodiment of the invention

includes a method for inhibiting (e.g., decreasing)	TNF alpha production. An	alternative highly preferred	embodiment of the invention	includes a method for	stimulating (e.g., increasing)	TNF alpha production.	Highly preferred indications	include blood disorders (e.g.,	as described below under	"Immune Activity", "Blood-	Related Disorders", and/or	"Cardiovascular Disorders"),	Highly preferred indications	include autoimmune diseases	(e.g., rheumatoid arthritis,	systemic lupus erythematosis,	Crohn"s disease, multiple	sclerosis and/or as described	below), immunodeficiencies	(e.g., as described below),	boosting a T cell-mediated	immune response, and	suppressing a T cell-mediated	immune response. Additional	highly preferred indications	include inflammation and	inflammatory disorders, and	treating joint damage in	patients with rheumatoid
produced by activated macrophages, T cells,	fibroblasts, smooth muscle,	and other cell types that exert a	wide variety of inflammatory	and cytotoxic effects on a	variety of cells are well known	in the art and may be used or	routinely modified to assess	the ability of polypeptides of	the invention (including	antibodies and agonists or	antagonists of the invention) to	mediate immunomodulation,	modulate inflammation and	cytotoxicity. Exemplary	assays that test for	immunomodulatory proteins	evaluate the production of	cytokines such as tumor	necrosis factor alpha (TNFa),	and the induction or inhibition	of an inflammatory or	cytotoxic response. Such	assays that may be used or	routinely modified to test	immunomodulatory activity of	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include assays
cells																													
																											-		

	disclosed in Miraplia et al. J	arthritis. An additional highly
	Biomolecular Screening 4:193-	preferred indication is sepsis.
	204(1999); Rowland et al.,	Highly preferred indications
	"Lymphocytes: a practical	include neoplastic diseases
	approach" Chapter 6:138-160	(e.g., leukemia, lymphoma,
	(2000); Verhasselt et al., Eur J	and/or as described below
	Immunol 28(11):3886-3890	under "Hyperproliferative
 	(1198); Dahlen et al., J	Disorders"). Additionally,
	Immunol 160(7):3585-3593	highly preferred indications
	(1998); Verhasselt et al., J	include neoplasms and
	Immunol 158:2919-2925	cancers, such as, leukemia,
	(1997); and Nardelli et al., J	lymphoma, melanoma, glioma
	Leukoc Biol 65:822-828	(e.g., malignant glioma), solid
	(1999), the contents of each of	tumors, and prostate, breast,
	which are herein incorporated	lung, colon, pancreatic,
	by reference in its entirety.	esophageal, stomach, brain,
	Human dendritic cells that may	liver and urinary cancer. Other
	be used according to these	preferred indications include
	assays may be isolated using	benign dysproliferative
-	techniques disclosed herein or	disorders and pre-neoplastic
	otherwise known in the art.	conditions, such as, for
	Human dendritic cells are	example, hyperplasia,
	antigen presenting cells in	metaplasia, and/or dysplasia.
	suspension culture, which,	Preferred indications include
 	when activated by antigen	anemia, pancytopenia,
	and/or cytokines, initiate and	leukopenia, thrombocytopenia,
 	upregulate T cell proliferation	Hodgkin's disease, acute
	and functional activities.	lymphocytic anemia (ALL),
		plasmacytomas, multiple
 		myeloma, Burkitt's lymphoma,
		arthritis, AIDS, granulomatous

					disease, inflammatory bowel disease, neutropenia,
					suppression of immune
					reactions to transplanted organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					cardiac reperfusion injury, and
					asthma and allergy. An
					additional preferred indication
					is infection (e.g., an infectious
					disease as described below
					under "Infectious Disease").
499	HSIAS17	1447	TNFa in Human T-cell 2B9		
499	HSIAS17	1447	MCP-1 in HUVEC		
	HSICV24	1448	Activation of	This reporter assay measures	Highly preferred indications
200			transcription	activation of the NFAT	include allergy, asthma, and
			through NFAT	signaling pathway in HMC-1	rhinitis. Additional preferred
	~		response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of NFAT in mast	(e.g., an infectious disease as
			as mast cells).	cells has been linked to	described below under
				cytokine and chemokine	"Infectious Disease"), and
				production. Assays for the	inflammation and
				activation of transcription	inflammatory disorders.
				through the Nuclear Factor of	Preferred indications also
				Activated T cells (NFAT)	include blood disorders (e.g.,
				response element are well-	as described below under

	known in the art and may be	"Immune Activity", "Blood-
	used or routinely modified to	Related Disorders", and/or
	assess the ability of	"Cardiovascular Disorders").
	polypeptides of the invention	Preferred indications include
	(including antibodies and	autoimmune diseases (e.g.,
	agonists or antagonists of the	rheumatoid arthritis, systemic
	invention) to regulate NFAT	lupus erythematosis, multiple
	transcription factors and	sclerosis and/or as described
	modulate expression of genes	below) and
	involved in	immunodeficiencies (e.g., as
	immunomodulatory functions.	described below). Preferred
	Exemplary assays for	indications include neoplastic
	transcription through the	diseases (e.g., leukemia,
	NFAT response element that	lymphoma, melanoma,
	may be used or routinely	prostate, breast, lung, colon,
-	modified to test NFAT-	pancreatic, esophageal,
	response element activity of	stomach, brain, liver, and
	polypeptides of the invention	urinary tract cancers and/or as
	(including antibodies and	described below under
	agonists or antagonists of the	"Hyperproliferative
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	indications include benign
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	Preferred indications include
	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia

				Hutchinson and McCloskey, J Biol Chem 270(27):16333-	(ALL), plasmacytomas, multiple myeloma, Burkitt's
				16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
				al., J Exp Med 188:527-537	granulomatous disease,
				(1998), the contents of each of	inflammatory bowel disease,
				which are herein incorporated	sepsis, neutropenia,
				by reference in its entirety.	neutrophilia, psoriasis,
				Mast cells that may be used	suppression of immune
				according to these assays are	reactions to transplanted
				publicly available (e.g.,	organs and tissues, hemophilia,
				through the ATCC).	hypercoagulation, diabetes
				Exemplary human mast cells	mellitus, endocarditis,
				that may be used according to	meningitis, and Lyme Disease.
				these assays include the HMC-	
				1 cell line, which is an	
				immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HSIDJ81	1449	Insulin Secretion	Assays for measuring secretion	A highly preferred indication
501				of insulin are well-known in	is diabetes mellitus. An
				the art and may be used or	additional highly preferred
				routinely modified to assess	indication is a complication
				the ability of polypeptides of	associated with diabetes (e.g.,
				the invention (including	diabetic retinopathy, diabetic
				antibodies and agonists or	nephropathy, kidney disease
				antagonists of the invention) to	(e.g., renal failure,
				stimulate insulin secretion.	nephropathy and/or other
				For example, insulin secretion	diseases and disorders as

is meas	is measured by FMAT using	described in the "Renal
anti-rat	anti-rat insulin antibodies.	Disorders" section below),
Insulin	Insulin secretion from	diabetic neuropathy, nerve
pancrea	pancreatic beta cells is	disease and nerve damage
upregu	upregulated by glucose and	(e.g., due to diabetic
also by	also by certain	neuropathy), blood vessel
protein	proteins/peptides, and	blockage, heart disease, stroke,
disregu	disregulation is a key	impotence (e.g., due to diabetic
compoi	component in diabetes.	neuropathy or blood vessel
Exemp	Exemplary assays that may be	blockage), seizures, mental
used or	used or routinely modified to	confusion, drowsiness,
test for	test for stimulation of insulin	nonketotic hyperglycemic-
secretic	secretion (from pancreatic	hyperosmolar coma,
 cells) b	cells) by polypeptides of the	cardiovascular disease (e.g.,
inventi	invention (including antibodies	heart disease, atherosclerosis,
and age	and agonists or antagonists of	microvascular disease,
the inve	the invention) include assays	hypertension, stroke, and other
disclos	disclosed in: Shimizu, H., et	diseases and disorders as
al., Enc	al., Endocr J, 47(3):261-9	described in the
(2000);	(2000); Salapatek, A.M., et al.,	"Cardiovascular Disorders"
Mol Er	Mol Endocrinol, 13(8):1305-	section below), dyslipidemia,
[ 17 (199	17 (1999); Filipsson, K., et al.,	endocrine disorders (as
Ann N	Ann N Y Acad Sci, 865:441-4	described in the "Endocrine
 (1998);	(1998); Olson, L.K., et al., J	Disorders" section below),
Biol Cl	Biol Chem, 271(28):16544-52	neuropathy, vision impairment
(1996)	(1996); and, Miraglia S et. al.,	(e.g., diabetic retinopathy and
Journal	Journal of Biomolecular	blindness), ulcers and impaired
Screen	Screening, 4:193-204 (1999),	wound healing, and infection
the con	the contents of each of which	(e.g., infectious diseases and
 is herei	is herein incorporated by	disorders as described in the
referen	reference in its entirety.	"Infectious Diseases" section

				Pancreatic cells that may be used according to these assays	below, especially of the urinary tract and skin), carnal
				are publicly available (e.g.,	tunnel syndrome and
				through the ATCC) and/or	Dupuytren's contracture).
				may be routinely generated.	An additional highly preferred
				Exemplary pancreatic cells that	indication is obesity and/or
				may be used according to these	complications associated with
				assays include HITT15 Cells.	obesity. Additional highly
				HITT15 are an adherent	preferred indications include
				epithelial cell line established	weight loss or alternatively,
				from Syrian hamster islet cells	weight gain. Additional highly
				transformed with SV40. These	preferred indications are
				cells express glucagon,	complications associated with
				somatostatin, and	insulin resistance.
				glucocorticoid receptors. The	
				cells secrete insulin, which is	
				stimulated by glucose and	
				glucagon and suppressed by	
				somatostatin or	
				glucocorticoids. ATTC# CRL-	
				1777 Refs: Lord and	
				Ashcroft. Biochem. J. 219:	
				547-551; Santerre et al. Proc.	
				Natl. Acad. Sci. USA 78:	
·				4339-4343, 1981.	
501	HSIDJ81	1449	TNFa in Human T-		
5	HSIDJ81	1449	Activation of	Assays for the activation of	Preferred embodiments of the
501			transcription	transcription through the	invention include using
			through NFKB	NFKB response element are	polypeptides of the invention
			response element in	well-known in the art and may	(or antibodies, agonists, or

Ч	be used or routinely modified	antagonists thereof) in
as SKINIMU Cells).	to assess the ability of polypeptides of the invention	detection, diagnosis, prevention, and/or treatment of
	(including antibodies and	Neurological Diseases and
	agonists or antagonists of the	Disorders (e.g. Alzheimer"s
	invention) to regulate NFKB	Disease, Parkinson''s Disease,
	transcription factors and	Brain Cancer, Seizures).
	modulate expression of	
	neuronal genes. Exemplary	
	assays for transcription	
 	through the NFKB response	
	element that may be used or	
	routinely modified to test	
	NFKB-response element	
	activity of polypeptides of the	
	invention (including antibodies	
	and agonists or antagonists of	
	the invention) include assays	
	disclosed in: Gill JS, et al.,	
	Neurobiol Dis, 7(4):448-461	
	(2000); Tamatani M, et al., J	
	Biol Chem, 274(13):8531-	
	8538 (1999); Berger et al.,	
	Gene 66:1-10 (1998); Cullen	
	and Malm, Methods in	
	Enzymol 216:362-368 (1992);	
	Henthorn et al., Proc Natl	
	Acad Sci USA 85:6342-6346	
	(1988); Valle Blazquez et al,	
	Immunology 90(3):455-460	
	(1997); Aramburau et al., J	

90	Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below under "Hyperproliferative Disorders"). Highly preferred indications include neoplasms and cancers, such as, for example, leukemia, lymphoma (e.g., T cell lymphoma, non-Hodgkins lymphoma, non-Hodgkin's disease), melanoma, and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and an and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and an and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and an and prostate, breast, lung, colon, pancreatic, esophageal, stomach, brain, liver and an and prostate.
Exp Med 82(3):801-810 (1995); and Fraser et al., 29(3):838-844 (1999), the contents of each of which are herein incorporated by reference in its entirety. Neuronal cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary neuronal cells that may be used according to these assays include the SKNMC neuronal cell line.	Assays for the activation of transcription through the Gamma Interferon Activation Site (GAS) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate STAT transcription factors and modulate gene expression involved in a wide variety of cell functions. Exemplary assays for transcription
	Activation of transcription through GAS response element in immune cells (such as T-cells).
	1450
	HSIDX71
	502

		element that may be used or	preferred indications include
		routinely modified to test	benign dysproliferative
		GAS-response element activity	disorders and pre-neoplastic
		of polypeptides of the	conditions, such as, for
		invention (including antibodies	example, hyperplasia,
		and agonists or antagonists of	metaplasia, and/or dysplasia.
		the invention) include assays	Preferred indications include
		disclosed in Berger et al., Gene	autoimmune diseases (e.g.,
		66:1-10 (1998); Cullen and	rheumatoid arthritis, systemic
		Malm, Methods in Enzymol	lupus erythematosis, multiple
		216:362-368 (1992); Henthorn	sclerosis and/or as described
		et al., Proc Natl Acad Sci USA	below), immunodeficiencies
		85:6342-6346 (1988);	(e.g., as described below),
		Matikainen et al., Blood	boosting a T cell-mediated
		93(6):1980-1991 (1999); and	immune response, and
		Henttinen et al., J Immunol	suppressing a T cell-mediated
		155(10):4582-4587 (1995), the	immune response. Additional
		contents of each of which are	preferred indications include
		herein incorporated by	inflammation and
		reference in its entirety.	inflammatory disorders.
		Exemplary mouse T cells that	Highly preferred indications
		may be used according to these	include blood disorders (e.g.,
		assays are publicly available	as described below under
		(e.g., through the ATCC).	"Immune Activity", "Blood-
		Exemplary T cells that may be	Related Disorders", and/or
		used according to these assays	"Cardiovascular Disorders"),
-		include the CTLL cell line,	and infection (e.g., viral
		which is a suspension culture	infections, tuberculosis,
		of IL-2 dependent cytotoxic T	infections associated with
		cells.	chronic granulomatosus
			disease and malignant

osteonorosis and/or an	infections disease as described	below under "Infectious	Disease"). An additional	preferred indication is	idiopathic pulmonary fibrosis.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,	acute lymphocytic anemia	(ALL), plasmacytomas,	multiple myeloma, arthritis,	AIDS, granulomatous disease,	inflammatory bowel disease,	sepsis, neutropenia,	neutrophilia, psoriasis,	suppression of immune	reactions to transplanted	organs and tissues,	hemophilia, hypercoagulation,	diabetes mellitus, endocarditis,	meningitis, Lyme Disease, and	asthma and allergy.	Activation of Kinase assay. Kinase assays, A highly preferred	Adipocyte ERK   for example an Elk-1 kinase   embodiment of the invention	Signaling Pathway assay, for ERK signal includes a method for	transduction that regulate cell	proliferation or differentiation proliferation. An alternative	are well known in the art and highly preferred embodiment	
																							HSJBQ79   1451	503   Adipo	Signa				

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adipocyte proliferation. A highly preferred embodiment of the invention includes a	method for stimulating adipocyte differentiation. An	alternative highly preferred	includes a method for	inhibiting adipocyte	differentiation. A highly	preferred embodiment of the	invention includes a method	for stimulating (e.g.,	increasing) adipocyte	activation. An alternative	highly preferred embodiment	of the invention includes a	method for inhibiting the	activation of (e.g., decreasing)	and/or inactivating adipocytes.	Highly preferred indications	include endocrine disorders	(e.g., as described below under	"Endocrine Disorders").	Highly preferred indications	also include neoplastic	diseases (e.g., lipomas,	liposarcomas, and/or as	described below under	"Hyperproliferative	Disorders"). Preferred
of polypeptides of the invention (including antibodies and agonists or antagonists of	the invention) to promote or inhibit cell proliferation,	activation, and differentiation.	kinase activity that may be	used or routinely modified to	test ERK kinase-induced	activity of polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) include the	assays disclosed in Forrer et	al., Biol Chem 379(8-9):1101-	1110 (1998); Le Marchand-	Brustel Y, Exp Clin	Endocrinol Diabetes	107(2):126-132 (1999);	Kyriakis JM, Biochem Soc	Symp 64:29-48 (1999); Chang	and Karin, Nature	410(6824):37-40 (2001); and	Cobb MH, Prog Biophys Mol	Biol 71(3-4):479-500 (1999);	the contents of each of which	are herein incorporated by	reference in its entirety.	Mouse adipocyte cells that	may be used according to these
																				•						
						-					_		***													

indications include blood disorders (e.g., hypertension, congestive heart failure, blood vessel blockage, heart disease, stroke, impotence and/or as	described below under "Immune Activity", "Cardiovascular Disorders", and/or "Blood-Related Disorders"), immune disorders	(e.g., as described below under "Immune Activity"), neural disorders (e.g., as described below under "Neural Activity and Neurological Diseases").	and infection (e.g., as described below under "Infectious Disease").  A highly preferred indication is diabetes mellitus. An	additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease	(e.g., renal tailure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve
assays are publicly available (e.g., through the ATCC). Exemplary mouse adipocyte cells that may be used according to these assays	include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte cell line that is a continuous substrain of 3T3 fibroblast cells developed	through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art			

disease and nerve damage  (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g., hart disease, atherosclerosis, microvascular disease, hypertension, stroke, and other diseases and disorders as described in the "Cardiovascular Disorders" section below), dyslipidemia, endocrine disorders (e.g., neuropathy, vision impairment (e.g., diabetic retinopathy and blindness), ulcers and impaired wound healing, infection (e.g., infectious diseases and disorders as described in the "Infectious Diseases"
below (particularly of the urinary tract and skin). An additional highly preferred

HSKCP69 1452 Activation of This transcription activity through GATA-3 sign response element in immune cells (such Activation as mast cells).						esophageal, stomach, brain,
1452 Activation of transcription through GATA-3 response element in immune cells (such as mast cells).						liver, and urinary cancer.
1452 Activation of transcription through GATA-3 response element in immune cells (such as mast cells).	_					Highly preferred indications include linomas and
1452 Activation of transcription through GATA-3 response element in immune cells (such as mast cells).						liposarcomas. Other preferred
1452 Activation of transcription through GATA-3 response element in immune cells (such as mast cells).	-					indications include benign
1452 Activation of transcription through GATA-3 response element in immune cells (such as mast cells).						dysproliferative disorders and
transcription through GATA-3 response element in immune cells (such as mast cells).						pre-neoplastic conditions, such
1452 Activation of transcription through GATA-3 response element in immune cells (such as mast cells).						as, for example, hyperplasia,
transcription through GATA-3 response element in immune cells (such as mast cells).						metaplasia, and/or dysplasia.
	<u> </u>	HSKCP69	1452	Activation of	This reporter assay measures	Highly preferred indications
				transcription	activation of the GATA-3	include allergy, asthma, and
			-	through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
				response element in	human mast cell line.	indications include infection
				immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as
cyto proc activ thro elen art a rout the i the i antia antia antia fact				as mast cells).	cells has been linked to	described below under
procactive through the second through through the second through the					cytokine and chemokine	"Infectious Disease"), and
active through the self-order of the self-order					production. Assays for the	inflammation and
thro elem art a rout the a rout the i antia antia antia antia antia expi	-				activation of transcription	inflammatory disorders.
art a rout rout the sample and antial antial antial regulation factors.					through the GATA3 response	Preferred indications also
art a rout rout the a rout the i antil antil antia regulation factor factor factor expired the inferior of the					element are well-known in the	include blood disorders (e.g.,
rout the set t					art and may be used or	as described below under
the antil antil antie antil antie exp					routinely modified to assess	"Immune Activity", "Blood-
the i antil antil antil antil regurence factor factor expr					the ability of polypeptides of	Related Disorders", and/or
antil antil antie regure regure facto					the invention (including	"Cardiovascular Disorders").
anta regu regu facto expi					antibodies and agonists or	Preferred indications include
regu facto expr					antagonists of the invention) to	autoimmune diseases (e.g.,
facto					regulate GATA3 transcription	rheumatoid arthritis, systemic
expr					factors and modulate	lupus erythematosis, multiple
					expression of mast cell genes	sclerosis and/or as described
dmi					important for immune response	below) and

dev	development. Exemplary	immunodeficiencies (e.g., as
assi	assays for transcription	described below). Preferred
 thre	through the GATA3 response	indications include neoplastic
ele	element that may be used or	diseases (e.g., leukemia,
 ron	routinely modified to test	lymphoma, melanoma,
 B	GATA3-response element	prostate, breast, lung, colon,
acti	activity of polypeptides of the	pancreatic, esophageal,
vni	invention (including antibodies	stomach, brain, liver, and
and	and agonists or antagonists of	urinary tract cancers and/or as
the	the invention) include assays	described below under
disc	disclosed in Berger et al., Gene	"Hyperproliferative
:99	66:1-10 (1998); Cullen and	Disorders"). Other preferred
Ma	Malm, Methods in Enzymol	indications include benign
216	216:362-368 (1992); Henthorn	dysproliferative disorders and
eta	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
85:	85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
eta	et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
 On —	Quant Biol 64:563-571 (1999);	Preferred indications include
Roo	Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
JIn	J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
(19	(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
Cel	II 89(4):587-596 (1997); and	acute lymphocytic anemia
Her	Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
14(	14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
con	contents of each of which are	lymphoma, arthritis, AIDS,
her	herein incorporated by	granulomatous disease,
refe	reference in its entirety. Mast	inflammatory bowel disease,
cell	cells that may be used	sepsis, neutropenia,
acc	according to these assays are	neutrophilia, psoriasis,
and	publicly available (e.g.,	suppression of immune
thre	through the ATCC).	reactions to transplanted

				Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of	organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease.
504	HSKCP69	1452	Activation of transcription through NFAT response element in immune cells (such as mast cells).	Immature mast cells.  This reporter assay measures activation of the NFAT signaling pathway in HMC-1 human mast cell line.  Activation of NFAT in mast cells has been linked to cytokine and chemokine	Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and
				production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of	inflammation and inflammatory disorders. Preferred indications also include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders").
				polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and modulate expression of genes	Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and

involved in	immunodeficiencies (e.g., as
imminomodulatory functions	described below) Preferred
Exemplary assays for	indications include neonlastic
transcription through the	diseases (e.g., leukemia,
NFAT response element that	lymphoma, melanoma,
may be used or routinely	prostate, breast, lung, colon,
modified to test NFAT-	pancreatic, esophageal,
response element activity of	stomach, brain, liver, and
polypeptides of the invention	urinary tract cancers and/or as
(including antibodies and	described below under
agonists or antagonists of the	"Hyperproliferative
invention) include assays	Disorders"). Other preferred
disclosed in Berger et al., Gene	indications include benign
66:1-10 (1998); Cullen and	dysproliferative disorders and
Malm, Methods in Enzymol	pre-neoplastic conditions, such
216:362-368 (1992); Henthorn	as, for example, hyperplasia,
et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
85:6342-6346 (1988); De Boer	Preferred indications include
 et al., Int J Biochem Cell Biol	anemia, pancytopenia,
31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
et al., J Immunol	leukemias, Hodgkin's disease,
165(12):7215-7223 (2000);	acute lymphocytic anemia
 Hutchinson and McCloskey, J	(ALL), plasmacytomas,
Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
 al., J Exp Med 188:527-537	granulomatous disease,
(1998), the contents of each of	inflammatory bowel disease,
which are herein incorporated	sepsis, neutropenia,
by reference in its entirety.	neutrophilia, psoriasis,
Mast cells that may be used	suppression of immune
according to these assays are	reactions to transplanted

				publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.	organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease.
505	HSKDA27	1453	MCP-1 in HUVEC		
505	HSKDA27	1453	Production of GM-CSF	GM-CSF FMAT. GM-CSF is expressed by activated T cells,	A highly preferred embodiment of the invention
				macrophages, endothelial cells,	includes a method for
				and fibroblasts. GM-CSF	stimulating the production of
				regulates differentiation and	GM-CSF. An alternative
				proliferation of granulocytes-	highly preferred embodiment
				macrophage progenitors and	of the invention includes a
				enhances antimicrobial activity	method for inhibiting the
				in neutrophils, monocytes and	production of GM-CSF.
				macrophage. Additionally,	Highly preferred indications
				GM-CSF plays an important	include inflammation and
				role in the differentiation of	inflammatory disorders. An
-				dendritic cells and monocytes,	additional highly preferred
				and increases antigen	indication is infection (e.g., as
				presentation. GM-CSF is	described below under
				considered to be a	"Infectious Disease".
				proinflammatory cytokine.	Highly preferred indications

		Assays for immunomodulatory include blood disorders (e.g.,		production of GM-CSF are prevention of neutropenia	well known in the art and may (e.g., in HIV infected patients),	be used or routinely modified and/or as described below	to assess the ability of under "Immune Activity";	polypeptides of the invention "Blood-Related Disorders",	(including antibodies and and/or "Cardiovascular	agonists or antagonists of the Disorders"). Highly preferred	invention) to mediate indications also include	immunomodulation and autoimmune diseases (e.g.,	modulate the growth and rheumatoid arthritis, systemic	differentiation of leukocytes.   lupus erythematosis, multiple	Exemplary assays that test for sclerosis and/or as described	immunomodulatory proteins   below) and	evaluate the production of immunodeficiencies (e.g., as	cytokines, such as GM-CSF, described below). Additional	and the activation of T cells. highly preferred indications	Such assays that may be used include asthma. Highly	or routinely modified to test preferred indications include	immunomodulatory activity of   neoplastic diseases (e.g.,	polypeptides of the invention   leukemia (e.g., acute	(including antibodies and   lymphoblastic leukemia, and	agonists or antagonists of the acute myelogenous leukemia),	invention) include the assays   lymphoma (e.g., non-	disclosed in Miraglia et al., J Hodgkin"s lymphoma and	Biomolecular Screening 4:193-   Hodgkin's disease), and/or as		"Lymphocytes: a practical "Hyperproliferative	approach" Chapter 6:138-160   Disorders"). Highly preferred	
--	--	------------------------------------------------------------	--	----------------------------------------------------	-----------------------------------------------------------------	---------------------------------------------------------	---------------------------------------------------	----------------------------------------------------------	--------------------------------------------------	--------------------------------------------------------------	------------------------------------------------	-------------------------------------------------	--------------------------------------------------------	----------------------------------------------------------------	--------------------------------------------------------------	----------------------------------------	---------------------------------------------------------	---------------------------------------------------------	-------------------------------------------------------------	-----------------------------------------------------	-------------------------------------------------------------	-----------------------------------------------------------	-------------------------------------------------------	---------------------------------------------------------	-------------------------------------------------------------	------------------------------------------------------	--------------------------------------------------------	---------------------------------------------------------------	--	-----------------------------------------------	-------------------------------------------------------------	--

	- 000 (0) (0)	
	Biol (58(2):225-233, the	and cancers, such as, leukemia,
	contents of each of which are	lymphoma, melanoma, and
	herein incorporated by	prostate, breast, lung, colon,
	reference in its entirety.	pancreatic, esophageal,
	Natural killer cells that may be	stomach, brain, liver and
	used according to these assays	urinary cancer. Other preferred
	are publicly available (e.g.,	indications include benign
	through the ATCC) or may be	dysproliferative disorders and
	isolated using techniques	pre-neoplastic conditions, such
	disclosed herein or otherwise	as, for example, hyperplasia,
	known in the art. Natural	metaplasia, and/or dysplasia.
	killer (NK) cells are large	Highly preferred indications
	granular lymphocytes that have	include: suppression of
	cytotoxic activity but do bind	immune reactions to
	antigen. NK cells show	transplanted organs and tissues
	antibody-independent killing	(e.g., bone marrow transplant);
	of tumor cells and also	accelerating myeloid recovery;
	recognize antibody bound on	and mobilizing hematopoietic
 	target cells, via NK Fc	progenitor cells. Preferred
	receptors, leading to cell-	indications include boosting a
	mediated cytotoxicity.	T cell-mediated immune
		response, and alternatively,
		suppressing a T cell-mediated
		immune response. Preferred
		indications include anemia,
		pancytopenia, leukopenia,
		thrombocytopenia, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		arthritis, AIDS, granulomatous

					disease, inflammatory bowel disease, sepsis, neutrophilia, psoriasis, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, and allergy.
505	HSKDA27	1453	Regulation of apoptosis in pancreatic beta cells.	Caspase Apoptosis. Assays for caspase apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote caspase protease-mediated apoptosis. Apoptosis in pancreatic beta is associated with induction and progression of diabetes. Exemplary assays for caspase apoptosis that may be used or routinely modified to test capase apoptosis activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in: Loweth, AC, et al., FEBS Lett, 400(3):285-8	A highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage, heart disease, stroke, impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental confusion, drowsiness, nonketotic hyperglycemichyperosmolar coma,

Biochem Mol Biol Int.	heart disease, atherosclerosis,
39(6):1229-36 (1996);	microvascular disease,
Krautheim, A., et al., Br J	hypertension, stroke, and other
Pharmacol, 129(4):687-94	diseases and disorders as
(2000); Chandra J, et al.,	described in the
Diabetes, 50 Suppl 1:S44-7	"Cardiovascular Disorders"
(2001); Suk K, et al., J	section below), dyslipidemia,
Immunol, 166(7):4481-9	endocrine disorders (as
(2001); Tejedo J, et al., FEBS	described in the "Endocrine
Lett, 459(2):238-43 (1999);	Disorders" section below),
Zhang, S., et al., FEBS Lett,	neuropathy, vision impairment
455(3):315-20 (1999); Lee et	(e.g., diabetic retinopathy and
al., FEBS Lett 485(2-3): 122-	blindness), ulcers and impaired
126 (2000); Nor et al., J Vasc	wound healing, and infection
Res 37(3): 209-218 (2000);	(e.g., infectious diseases and
and Karsan and Harlan, J	disorders as described in the
Atheroscler Thromb 3(2): 75-	"Infectious Diseases" section
80 (1996); the contents of each	below, especially of the
of which are herein	urinary tract and skin), carpal
incorporated by reference in its	tunnel syndrome and
entirety. Pancreatic cells that	Dupuytren's contracture).
may be used according to these	An additional highly preferred
assays are publicly available	indication is obesity and/or
(e.g., through the ATCC)	complications associated with
and/or may be routinely	obesity. Additional highly
generated. Exemplary	preferred indications include
pancreatic cells that may be	weight loss or alternatively,
used according to these assays	weight gain. Aditional
include RIN-m. RIN-m is a	highly preferred indications are
rat adherent pancreatic beta	complications associated with
cell insulinoma cell line	insulin resistance.

				derived from a radiation induced transplantable rat islet cell tumor. The cells produce and secrete islet polypeptide hormones, and produce insulin, somatostatin, and possibly glucagon. ATTC: #CRL-2057 Chick et al. Proc. Natl. Acad. Sci. 1977 74:628; AF et al. Proc. Natl. Acad. Sci. 1980 77:3519.	
505	HSKDA27	1453	Caspase (+paclitaxel) in SW480		
206	HSKHZ81	1454	SEAP in 293/ISRE		
206			transcription through cAMP response element (CRE) in pre- adipocytes.	transcription through the cAMP response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to increase cAMP, regulate CREB transcription factors, and modulate expression of genes involved	is obesity and/or complications associated with obesity. Additional highly preferred indications include weight loss or alternatively, weight gain. An additional highly preferred indication is diabetes mellitus. An additional highly preferred indication is a complication associated with diabetes (e.g., diabetic retinopathy, diabetic nephropathy, kidney disease
				in a wide variety of cell functions. For example, a	(e.g., renal failure, nephropathy and/or other

	3T3-L1/CRE reporter assav	diseases and disorders as
	may be used to identify factors	described in the "Renal
	that activate the cAMP	Disorders" section below).
	signaling pathway. CREB	diabetic neuropathy, nerve
	plays a major role in	disease and nerve damage
	adipogenesis, and is involved	(e.g., due to diabetic
	in differentiation into	neuropathy), blood vessel
	adipocytes. CRE contains the	blockage, heart disease, stroke,
	binding sequence for the	impotence (e.g., due to diabetic
	transcription factor CREB	neuropathy or blood vessel
	(CRE binding protein).	blockage), seizures, mental
	Exemplary assays for	confusion, drowsiness,
	transcription through the	nonketotic hyperglycemic-
	cAMP response element that	hyperosmolar coma,
	may be used or routinely	cardiovascular disease (e.g.,
	modified to test cAMP-	heart disease, atherosclerosis,
	response element activity of	microvascular disease,
	polypeptides of the invention	hypertension, stroke, and other
	(including antibodies and	diseases and disorders as
	agonists or antagonists of the	described in the
	invention) include assays	"Cardiovascular Disorders"
	disclosed in Berger et al., Gene	section below), dyslipidemia,
	66:1-10 (1998); Cullen and	endocrine disorders (as
	Malm, Methods in Enzymol	described in the "Endocrine
	216:362-368 (1992); Henthorn	Disorders" section below),
	et al., Proc Natl Acad Sci USA	neuropathy, vision impairment
	85:6342-6346 (1988); Reusch	(e.g., diabetic retinopathy and
	et al., Mol Cell Biol	blindness), ulcers and impaired
	20(3):1008-1020 (2000); and	wound healing, and infection
	Klemm et al., J Biol Chem	(e.g., infectious diseases and
	273:917-923 (1998), the	disorders as described in the

contents of each of which are herein incorporated by reference in its entirety. Predipocytes that may be used according to these assays are publicly available (e.g., through the ATCC) and/or may be routinely generated. Exemplary mouse adipocyte cells that may be used according to these assays include 3T3-L1 cells. 3T3-L1 is an adherent mouse preadipocyte continuous substrain of 3T3 fibroblast cells developed through clonal isolation and undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.	Reporter Assay: construct contains regulatory and coding sequence of squalene synthetase, the first specific enzyme in the cholesterol biosynthetic pathway. See Jiang, et al., J. Biol. Chem. 268:12818-128241(993), the contents of which are herein
contents of herein increase adipocyte according publicly a through the may be recells that according include 3 is an adhoperadipocontinuou fibroblast through continuou fibroblast through continuou adipose-lappropriae condition condition	Inhibition of Reporter squalene synthetase contains gene transcription. sequence synthetas enzyme i biosynthe Jiang, et a 268:1281 contents incornora
	HSKHZ81 1454
	909

	Preferred embodiments of the invention include using polypeptides of the invention (or antibodies, agonists, or antagonists thereof) in detection, diagnosis, prevention, and/or treatment of Inflammation, Vascular Disease, Athereosclerosis, Restenosis, and Stroke
entirety. Cells were treated with SID supernatants, and SEAP activity was measured after 72 hours. HepG2 is a human hepatocellular carcinoma cell line (ATCC HB-8065). See Knowles et al., Science. 209:497-9 (1980), the contents of which are herein incorporated by reference in its entirety.	Assays for measuring expression of ICAM-1 are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate ICAM-1 expression. Exemplary assays that may be used or routinely modified to measure ICAM-1 expression include assays disclosed in: Takacs P, et al, FASEB J, 15(2):279-281 (2001); and, Miyamoto K, et al., Am J Pathol, 156(5):1733-1739 (2000), the contents of each of which is herein incorporated by reference in its
	Production of ICAM-1
	1454
	HSKHZ81
	900

		A highly preferred	embodiment of the invention	includes a method for	stimulating adipocyte	proliferation. An alternative	highly preferred embodiment	of the invention includes a	method for inhibiting	adipocyte proliferation. A	highly preferred embodiment	of the invention includes a	method for stimulating	adipocyte differentiation. An	alternative highly preferred	embodiment of the invention	includes a method for	inhibiting adipocyte	differentiation. A highly	preferred embodiment of the
entirety. Cells that may be used according to these assays are publicly available (e.g., through the ATCC) and/or may be routinely generated. Exemplary cells that may be used according to these assays include microvascular endothelial cells (MVEC).		Kinase assay. Kinase assays,	for example an Elk-1 kinase	assay, for ERK signal	transduction that regulate cell	proliferation or differentiation	are well known in the art and	may be used or routinely	modified to assess the ability	of polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) to promote or	inhibit cell proliferation,	activation, and differentiation.	Exemplary assays for ERK	kinase activity that may be	used or routinely modified to	test ERK kinase-induced	activity of polypeptides of the
	Caspase (+paclitaxel) in SW480	Activation of	Adipocyte ERK	Signaling Pathway																
	1454	1455																		
	HSKHZ81	HSKNB56						-												
	906		507		201															

invention (including antibodies	invention includes a method
and agonists or antagonists of	for stimulating (e.g.,
the invention) include the	increasing) adipocyte
assays disclosed in Forrer et	activation. An alternative
al., Biol Chem 379(8-9):1101-	highly preferred embodiment
1110 (1998); Le Marchand-	of the invention includes a
 Brustel Y, Exp Clin	method for inhibiting the
 Endocrinol Diabetes	activation of (e.g., decreasing)
107(2):126-132 (1999);	and/or inactivating adipocytes.
Kyriakis JM, Biochem Soc	Highly preferred indications
Symp 64:29-48 (1999); Chang	include endocrine disorders
and Karin, Nature	(e.g., as described below under
410(6824):37-40 (2001); and	"Endocrine Disorders").
Cobb MH, Prog Biophys Mol	Highly preferred indications
 Biol 71(3-4):479-500 (1999);	also include neoplastic
the contents of each of which	diseases (e.g., lipomas,
are herein incorporated by	liposarcomas, and/or as
reference in its entirety.	described below under
Mouse adipocyte cells that	"Hyperproliferative
may be used according to these	Disorders"). Preferred
assays are publicly available	indications include blood
(e.g., through the ATCC).	disorders (e.g., hypertension,
Exemplary mouse adipocyte	congestive heart failure, blood
cells that may be used	vessel blockage, heart disease,
according to these assays	stroke, impotence and/or as
include 3T3-L1 cells. 3T3-L1	described below under
is an adherent mouse	"Immune Activity",
preadipocyte cell line that is a	"Cardiovascular Disorders",
continuous substrain of 3T3	and/or "Blood-Related
fibroblast cells developed	Disorders"), immune disorders
through clonal isolation and	(e.g., as described below under

	"Infectious Disease").  A highly preferred indication is diabetes mellitus. An additional highly preferred	associated with diabetes (e.g., diabetic retinopathy, diabetic	nephropathy, kidney disease (e.g., renal failure, nephropathy and/or other	diseases and disorders as described in the "Renal Disorders" section below), diabetic neuropathy, nerve	disease and nerve damage (e.g., due to diabetic neuropathy), blood vessel blockage heart disease stroke	impotence (e.g., due to diabetic neuropathy or blood vessel blockage), seizures, mental	confusion, drowsiness, nonketotic hyperglycemic- hyperosmolar coma, cardiovascular disease (e.g.,
undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.							

		heart disease, atherosclerosis,
		microvascular disease,
		hypertension, stroke, and other
		diseases and disorders as
		described in the
		"Cardiovascular Disorders"
		section below), dyslipidemia,
		endocrine disorders (as
		described in the "Endocrine
		Disorders" section below),
		neuropathy, vision impairment
		(e.g., diabetic retinopathy and
		blindness), ulcers and impaired
		wound healing, infection (e.g.,
		infectious diseases and
		disorders as described in the
		"Infectious Diseases" section
		below (particularly of the
		urinary tract and skin). An
		additional highly preferred
		indication is obesity and/or
		complications associated with
		obesity. Additional highly
		preferred indications include
		weight loss or alternatively,
		weight gain. Additional
		highly preferred indications are
-		complications associated with
		insulin resistance.
		Additional highly preferred
		indications are disorders of the

		or as		eq		rtery			ing	xia,			asms				red	noma,	ာ့်	ain,		ons		ferred	Ľ.	s and	s, such	ısia,	ısia.
vstems	hies,	hy, and/		preferr	le,	onary a	mia,	urthritis,	ritis, eat	s, cache.	ses or	Preferred	le neopl	as,	mia and	kidney	ul prefer	le melaı	ancreati	ach, br	cancer.	indicati	puı	ther pre	le benig	lisorder	nditions	ıyperplε	r dyspla
keletal s	myopat	dystrop	herein.	ıl highly	is incluc	ion, cor	yslipide	s, osteoa	ive arth	fibrosis	y diseas	Pref	is incluc	r, such	a, leuke	lon, and	dditiona	is includ	lung, p	al, stom	urinary	eferred	pomas a	mas. Ot	s incluc	erative d	astic co	ample, ł	a, and/o
musculoskeletal systems	including myopathies,	muscular dystrophy, and/or as	described herein.	Additional highly preferred	indications include,	hypertension, coronary artery	disease, dyslipidemia,	gallstones, osteoarthritis,	degenerative arthritis, eating	disorders, fibrosis, cachexia,	and kidney diseases or	disorders.	indications include neoplasms	and cancer, such as,	lymphoma, leukemia and	breast, colon, and kidney	cancer. Additional preferred	indications include melanoma,	prostate, lung, pancreatic,	esophageal, stomach, brain,	liver, and urinary cancer.	Highly preferred indications	include lipomas and	liposarcomas. Other preferred	indications include benign	dysproliferative disorders and	pre-neoplastic conditions, such	as, for example, hyperplasia,	metaplasia, and/or dysplasia.
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508		transcription	transcription through the	the invention includes a
		through serum	Serum Response Element	method for inhibiting (e.g.,
		response element in	(SRE) are well-known in the	reducing) TNF alpha
		immune cells (such	art and may be used or	production. An alternative
		as T-cells).	routinely modified to assess	preferred embodiment of the
			the ability of polypeptides of	invention includes a method
			the invention (including	for stimulating (e.g.,
			antibodies and agonists or	increasing) TNF alpha
			antagonists of the invention) to	production. Preferred
			regulate the serum response	indications include blood
			factors and modulate the	disorders (e.g., as described
			expression of genes involved	below under "Immune
			in growth. Exemplary assays	Activity", "Blood-Related
			for transcription through the	Disorders", and/or
			SRE that may be used or	"Cardiovascular Disorders"),
			routinely modified to test SRE	Highly preferred indications
			activity of the polypeptides of	include autoimmune diseases
			the invention (including	(e.g., rheumatoid arthritis,
			antibodies and agonists or	systemic lupus erythematosis,
			antagonists of the invention)	Crohn"s disease, multiple
			include assays disclosed in	sclerosis and/or as described
			Berger et al., Gene 66:1-10	below), inmunodeficiencies
	_		(1998); Cullen and Malm,	(e.g., as described below),
			Methods in Enzymol 216:362-	boosting a T cell-mediated
			368 (1992); Henthorn et al.,	immune response, and
			Proc Natl Acad Sci USA	suppressing a T cell-mediated
			85:6342-6346 (1988); and	immune response. Additional
			Black et al., Virus Genes	highly preferred indications
			12(2):105-117 (1997), the	include inflammation and
			content of each of which are	inflammatory disorders, and
			herein incorporated by	treating joint damage in

myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, neutropenia, neutrophilia, psoriasis, suppression of immune reactions to transplanted organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, cardiac reperfusion injury, and asthma and allergy. An additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").	
	expressed by activated T cells, macrophages, endothelial cells, and fibroblasts. GM-CSF regulates differentiation and proliferation of granulocytes-macrophage progenitors and enhances antimicrobial activity in neutrophils, monocytes and macrophage. Additionally, GM-CSF plays an important role in the differentiation of dendritic cells and monocytes, and increases antigen
	Production of GM-CSF
	1457
	HSLJG37
	509

		presentation. GM-CSF is	described below under
		considered to be a	"Infectious Disease".
		proinflammatory cytokine.	Highly preferred indications
		Assays for immunomodulatory	include blood disorders (e.g.,
	_	proteins that promote the	neutropenia (and the
		production of GM-CSF are	prevention of neutropenia
		well known in the art and may	(e.g., in HIV infected patients),
		be used or routinely modified	and/or as described below
	_	to assess the ability of	under "Immune Activity",
		polypeptides of the invention	"Blood-Related Disorders",
		(including antibodies and	and/or "Cardiovascular
		agonists or antagonists of the	Disorders"). Highly preferred
		invention) to mediate	indications also include
		immunomodulation and	autoimmune diseases (e.g.,
	-	modulate the growth and	rheumatoid arthritis, systemic
		differentiation of leukocytes.	lupus erythematosis, multiple
		Exemplary assays that test for	sclerosis and/or as described
		immunomodulatory proteins	below) and
		evaluate the production of	immunodeficiencies (e.g., as
-		cytokines, such as GM-CSF,	described below). Additional
		and the activation of T cells.	highly preferred indications
		Such assays that may be used	include asthma. Highly
		or routinely modified to test	preferred indications include
		immunomodulatory activity of	neoplastic diseases (e.g.,
		polypeptides of the invention	leukemia (e.g., acute
		(including antibodies and	lymphoblastic leukemia, and
		agonists or antagonists of the	acute myelogenous leukemia),
		invention) include the assays	lymphoma (e.g., non-
		disclosed in Miraglia et al., J	Hodgkin"s lymphoma and
		Biomolecular Screening 4:193-	Hodgkin"s disease), and/or as
	;	204 (1999); Rowland et al.,	described below under

T.	"Lymphocytes: a practical	"Hyperproliferative
TR T	approach" Chapter 6:138-160	Disorders") Highly preferred
	(2000); and Ye et al., J Leukoc	indications include neoplasms
Bi	Biol (58(2):225-233, the	and cancers, such as, leukemia,
00	contents of each of which are	lymphoma, melanoma, and
 he he	herein incorporated by	prostate, breast, lung, colon,
rel	reference in its entirety.	pancreatic, esophageal,
 Z	Natural killer cells that may be	stomach, brain, liver and
sn	used according to these assays	urinary cancer. Other preferred
are	are publicly available (e.g.,	indications include benign
thi	through the ATCC) or may be	dysproliferative disorders and
 isc	isolated using techniques	pre-neoplastic conditions, such
 dis	disclosed herein or otherwise	as, for example, hyperplasia,
 kn	known in the art. Natural	metaplasia, and/or dysplasia.
kil	killer (NK) cells are large	Highly preferred indications
928	granular lymphocytes that have	include: suppression of
cy	cytotoxic activity but do bind	immune reactions to
an	antigen. NK cells show	transplanted organs and tissues
an	antibody-independent killing	(e.g., bone marrow transplant);
Jo	of tumor cells and also	accelerating myeloid recovery;
rec	recognize antibody bound on	and mobilizing hematopoietic
 tar	target cells, via NK Fc	progenitor cells. Preferred
rec	receptors, leading to cell-	indications include boosting a
me	mediated cytotoxicity.	T cell-mediated immune
		response, and alternatively,
		suppressing a T cell-mediated
		immune response. Preferred
		indications include anemia,
		pancytopenia, leukopenia,
		thrombocytopenia, acute
		lymphocytic anemia (ALL),

plasmacytomas, multiple myeloma, Burkitt's lymphoma, arthritis, AIDS, granulomatous disease, inflammatory bowel disease, sepsis, neutrophilia, psoriasis, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, Lyme Disease, and allergy.	
	Assays for the regulation (i.e. increases or decreases) of viability and proliferation of cells in vitro are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate viability and proliferation of pre-adipose cells and cell lines. For example, the CellTiter-Gloô Luminescent Cell Viability Assay (Promega Corp., Madison, WI, USA) can be used to measure the number of viable cells in culture based on quantitation of the ATP present which signals the
	Proliferation of preadipose cells (such as 3T3-L1 cells)
	1458
	HSODE04
	019

	A highly preferred embodiment of the invention includes a method for stimulating the production of IFNg. An alternative highly preferred embodiment of the invention includes a method for inhibiting the production of IFNg. Highly preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), and infection (e.g., viral infections, tuberculosis, infections, associated with
presence of metabolically active cells. 3T3-L1 is a mouse preadipocyte cell line. It is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation. Cells were differentiated to an adipose-like state before being used in the screen. See Green H and Meuth M., Cell 3: 127-133 (1974), which is herein incorporated by reference in its entirety.	IFNgamma FMAT. IFNg plays a central role in the immune system and is considered to be a proinflammatory cytokine.  IFNg promotes TH1 and inhibits TH2 differentiation; promotes IgG2a and inhibits lgE secretion; induces macrophage activation; and increases MHC expression.  Assays for immunomodulatory proteins produced by T cells and NK cells that regulate a variety of inflammatory activities and inhibit TH2 helper cell functions are well known in the art and may be insed or routinely modified to
	Production of IFNgamma using a T cells
	1458
	HSODE04
	510

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chronic granulomatosus disease and malignant osteoporosis, and/or as	described below under "Infectious Disease"). Highly	preferred indications include	autoimmune disease (e.g., rheumatoid arthritis, systemic	lupus erythematosis, multiple	sclerosis and/or as described	below), immunodeficiency	(e.g., as described below),	boosting a T cell-mediated	immune response, and	suppressing a T cell-mediated	immune response. Additional	highly preferred indications	include inflammation and	inflammatory disorders.	Additional preferred	indications include idiopathic	pulmonary fibrosis. Highly	preferred indications include	neoplastic diseases (e.g.,	leukemia, lymphoma,	melanoma, and/or as described	below under	"Hyperproliferative	Disorders"). Highly preferred	indications include neoplasms	and cancers, such as, for
assess the ability of polypeptides of the invention (including antibodies and	agonists or antagonists of the invention) to mediate	immunomodulation, regulate	inflammatory activities,   modulate TH2 helper cell	function, and/or mediate	humoral or cell-mediated	immunity. Exemplary assays	that test for	immunomodulatory proteins	evaluate the production of	cytokines, such as Interferon	gamma (IFNg), and the	activation of T cells. Such	assays that may be used or	routinely modified to test	immunomodulatory activity of	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include the assays	disclosed in Miraglia et al., J	Biomolecular Screening 4:193-	204 (1999); Rowland et al.,	"Lymphocytes: a practical	approach" Chapter 6:138-160	(2000); Gonzalez et al., J Clin	Lab Anal 8(5):225-233 (1995):
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				Billiau et al., Ann NY Acad	example, leukemia, lymphoma,
				Sci 856:22-32 (1998); Boehm	melanoma, and prostate,
				et al., Annu Rev Immunol	breast, lung, colon, pancreatic,
				15:749-795 (1997), and	esophageal, stomach, brain,
				Rheumatology (Oxford)	liver and urinary cancer. Other
				38(3):214-20 (1999), the	preferred indications include
				contents of each of which are	benign dysproliferative
				herein incorporated by	disorders and pre-neoplastic
				reference in its entirety.	conditions, such as, for
				Human T cells that may be	example, hyperplasia,
				used according to these assays	metaplasia, and/or dysplasia.
				may be isolated using	Preferred indications include
				techniques disclosed herein or	anemia, pancytopenia,
				otherwise known in the art.	leukopenia, thrombocytopenia,
				Human T cells are primary	Hodgkin's disease, acute
				human lymphocytes that	lymphocytic anemia (ALL),
				mature in the thymus and	plasmacytomas, multiple
				express a T Cell receptor and	myeloma, Burkitt's lymphoma,
				CD3, CD4, or CD8. These	arthritis, AIDS, granulomatous
				cells mediate humoral or cell-	disease, inflammatory bowel
				mediated immunity and may	disease, sepsis, neutropenia,
				be preactivated to enhance	neutrophilia, psoriasis,
				responsiveness to	suppression of immune
				immunomodulatory factors.	reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					asthma and allergy.
510	HSODE04	1458	IFNg in Human T- cell 2B9		

	HSPBF70	1459	CD152 in Human T		
511			cells		
	HSQE084	1460	Regulation of	Assays for the regulation (i.e.	Highly preferred indications
512	-		viability or	increases or decreases) of	include eosinophilia, asthma,
			proliferation of	viability and proliferation of	allergy, hypersensitivity
			immune cells (such	cells in vitro are well-known in	reactions, inflammation, and
			as human	the art and may be used or	inflammatory disorders.
			eosinophil EOL-1	routinely modified to assess	Additional highly preferred
			cells).	the ability of polypeptides of	indications include immune
				the invention (including	and hematopoietic disorders
				antibodies and agonists or	(e.g., as described below under
				antagonists of the invention) to	"Immune Activity", and
				regulate viability and	"Blood-Related Disorders"),
				proliferation of eosinophil cells	autoimmune diseases (e.g.,
				and cell lines. For example,	rheumatoid arthritis, systemic
				the CellTiter-Gloô	lupus erythematosis, Crohn"s
				Luminescent Cell Viability	disease, multiple sclerosis
				Assay (Promega Corp.,	and/or as described below),
				Madison, WI, USA) can be	immunodeficiencies (e.g., as
				used to measure the number of	described below). Highly
				viable cells in culture based on	preferred indications also
				quantitation of the ATP	include boosting or inhibiting
				present which signals the	immune cell proliferation.
				presence of metabolically	Preferred indications include
				active cells. Eosinophils are a	neoplastic diseases (e.g.,
				type of immune cell important	leukemia, lymphoma, and/or as
				in allergic responses; they are	described below under
				recruited to tissues and	"Hyperproliferative
				mediate the inflammtory	Disorders"). Highly preferred
				response of late stage allergic	indications include boosting an
				reaction. Eosinophil cell lines	eosinophil-mediated immune

Activation of transcription through GATA-3
response element in immune cells (such
as mast cells).

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indications include neoplastic diseases (e.g., leukemia,	lymphoma, melanoma,	prostate, breast, lung, colon,	pancreatic, esophageal,	stomach, brain, liver, and	urinary tract cancers and/or as	described below under	"Hyperproliferative	Disorders"). Other preferred	indications include benign	dysproliferative disorders and	pre-neoplastic conditions, such	as, for example, hyperplasia,	metaplasia, and/or dysplasia.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,	leukemias, Hodgkin's disease,	acute lymphocytic anemia	(ALL), plasmacytomas,	multiple myeloma, Burkitt's	lymphoma, arthritis, AIDS,	granulomatous disease,	inflammatory bowel disease,	sepsis, neutropenia,	neutrophilia, psoriasis,	suppression of immune	reactions to transplanted	organs and tissues, hemophilia,	hypercoagulation, diabetes
through the GATA3 response element that may be used or	routinely modified to test	GATA3-response element	activity of polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) include assays	disclosed in Berger et al., Gene	66:1-10 (1998); Cullen and	Malm, Methods in Enzymol	216:362-368 (1992); Henthorn	et al., Proc Natl Acad Sci USA	85:6342-6346 (1988); Flavell	et al., Cold Spring Harb Symp	Quant Biol 64:563-571 (1999);	Rodriguez-Palmero et al., Eur	J Immunol 29(12):3914-3924	(1999); Zheng and Flavell,	Cell 89(4):587-596 (1997); and	Henderson et al., Mol Cell Biol	14(6):4286-4294 (1994), the	contents of each of which are	herein incorporated by	reference in its entirety. Mast	cells that may be used	according to these assays are	publicly available (e.g.,	through the ATCC).	Exemplary human mast cells	that may be used according to
																											***************************************		
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	1																							-					

HSQEO84	1460	Activation of transcription through NFAT response element in immune cells (such as mast cells).	immature mast cell line. This reporter assay measures assays meature human mast cell leukemia, and exhibits many characteristics of immature mast cells.  This reporter assay measures activation of the NFAT in mast cells has been linked to cells has been linked to cytokine and chemokine immature immature mast cells has been linked to cytokine and chemokine infinements. I cell line immature mast cell line.  Total line, which is a meningitis, and Lyme meningitis, and Lyme include include include include include include and chemokine include	meningitis, and Lyme Disease. Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indication (e.g., an infectious disease as described below under "Infectious Disease"), and	
			production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and modulate expression of genes involved in immunomodulatory functions.	inflammation and inflammatory disorders. Preferred indications also include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below). Preferred	

	Exemplary assays for	indications include neoplastic
	transcription through the	diseases (e.g., leukemia,
	NFAT response element that	lymphoma, melanoma,
	may be used or routinely	prostate, breast, lung, colon,
	modified to test NFAT-	pancreatic, esophageal,
	response element activity of	stomach, brain, liver, and
	polypeptides of the invention	urinary tract cancers and/or as
	(including antibodies and	described below under
	agonists or antagonists of the	"Hyperproliferative
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	indications include benign
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	Preferred indications include
	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
-	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia
	Hutchinson and McCloskey, J	(ALL), plasmacytomas,
	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
	16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
	al., J Exp Med 188:527-537	granulomatous disease,
	(1998), the contents of each of	inflammatory bowel disease,
	which are herein incorporated	sepsis, neutropenia,
	by reference in its entirety.	neutrophilia, psoriasis,
	Mast cells that may be used	suppression of immune
	according to these assays are	reactions to transplanted
	publicly available (e.g.,	organs and tissues, hemophilia,
<u> </u>	through the ATCC).	hypercoagulation, diabetes

				Exemplary human mast cells that may be used according to these assays include the HMC-	mellitus, endocarditis, meningitis, and Lyme Disease.
				1 cell line, which is an immature human mast cell line	
				established from the peripheral	
				blood of a patient with mast	
				cell leukemia, and exhibits	
				many characteristics of	
				immature mast cells.	
	HSQE084	1460	Proliferation of pre-	Assays for the regulation (i.e.	
512	-		adipose cells (such	increases or decreases) of	
			as 3T3-L1 cells)	viability and proliferation of	
				cells in vitro are well-known in	
				the art and may be used or	
		-		routinely modified to assess	
	-			the ability of polypeptides of	
	-			the invention (including	
				antibodies and agonists or	
	-			antagonists of the invention) to	
	-			regulate viability and	
				proliferation of pre-adipose	
				cells and cell lines. For	
				example, the CellTiter-Gloô	
				Luminescent Cell Viability	
				Assay (Promega Corp.,	
				Madison, WI, USA) can be	
				used to measure the number of	
				viable cells in culture based on	
				quantitation of the ATP	
				present which signals the	

				presence of metabolically active cells. 3T3-L1 is a mouse preadipocyte cell line. It is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation. Cells were differentiated to an adipose-like state before being used in the screen. See Green H and Meuth M., Cell 3: 127-133 (1974), which is herein incorporated by reference in its	
HS	HSQEO84	1460	Production of	enurety. Endothelial cells, which are	Highly preferred indications
			ICAM in	cells that line blood vessels,	include inflammation (acute
			endothelial cells	and are involved in functions	and chronic), restnosis,
			(such as human	that include, but are not limited	atherosclerosis, asthma and
			umbilical vein	to, angiogenesis, vascular	allergy. Highly preferred
			endothelial cells	permeability, vascular tone,	indications include
			(HUVEC))	and immune cell extravasation.	inflammation and
				Exemplary endothelial cells	inflammatory disorders,
				that may be used in ICAM	immunological disorders,
				production assays include	neoplastic disorders (e.g.
				human umbilical vein	cancer/tumorigenesis), and
				endothelial cells (HUVEC),	cardiovascular disorders (such
				and are available from	as described below under
				commercial sources. The	"Immune Activity", "Blood-
				expression of ICAM (CD54),a	Related Disorders",
				intergral membrane protein,	"Hyperproliferative Disorders"
				can be upregulated by	and/or "Cardiovascular
				cytokines or other factors, and	Disorders"). Highly preferred

				ICAM expression is important	indications include neonlasms
				in mediating immine and	and cancers such as for
					and cancels such as, for
				endothelial cell interactions	example, leukemia, lympnoma,
				leading to immune and	melanoma, renal cell
				inflammatory responses.	carcinoma, and prostate,
				Assays for measuring	breast, lung, colon, pancreatic,
				expression of ICAM-1 are	esophageal, stomach, brain,
				well-known in the art and may	liver and urinary cancer. Other
				be used or routinely modified	preferred indications include
				to assess the ability of	benign dysproliferative
				polypeptides of the invention	disorders and pre-neoplastic
-				(including antibodies and	conditions, such as, for
				agonists or antagonists of the	example, hyperplasia,
	-			invention) to regulate ICAM-1	metaplasia, and/or dysplasia.
				expression. Exemplary assays	
				that may be used or routinely	
				modified to measure ICAM-1	
				expression include assays	
				disclosed in: Rolfe BE, et al.,	
				Atherosclerosis, 149(1):99-110	
				(2000); Panettieri RA Jr, et al.,	
				J Immunol, 154(5):2358-2365	
				(1995); and, Grunstein MM, et	
				al., Am J Physiol Lung Cell	
				Mol Physiol, 278(6):L1154-	
				L1163 (2000), the contents of	
				each of which is herein	
				incorporated by reference in its	
				entirety.	
512	HSQE084	1460	IL-6 in HUVEC		
717					

RANTES FMAT. Assays for	immunomodulatory proteins	that induce chemotaxis of T	cells, monocytes, and	eosinophils are well known in	the art and may be used or	routinely modified to assess	the ability of polypeptides of	the invention (including	antibodies and agonists or	antagonists of the invention) to	mediate immunomodulation,	induce chemotaxis, and/or	mediate humoral or cell-	mediated immunity.	Exemplary assays that test for	immunomodulatory proteins	evaluate the production of	cytokines, such as RANTES,	and the induction of	chemotactic responses in	immune cells. Such assays	that may be used or routinely	modified to test	immunomodulatory activity of	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include the assays	disclosed in Miraglia et al., J	Biomolecular Screening 4:193-
Production of	RANTES in	endothelial cells	(such as human	umbilical vein	endothelial cells	(HUVEC))																								
1460																									_					
HSQEO84																														
	512																	-												

204 (1999); Rowland et al.,	"Lymphocytes: a practical	approach" Chapter 6:138-160	(2000): Cocchi et al., Science	270(5243):1811-1815 (1995);	and Robinson et al., Clin Exp	Immunol 101(3):398-407	(1995), the contents of each of	which are herein incorporated	by reference in its entirety.	Endothelial cells that may be	used according to these assays	are publicly available (e.g.,	through the ATCC).	Exemplary endothelial cells	that may be used according to	these assays include human	umbilical vein endothelial cells	(HUVEC), which are	endothelial cells which line	venous blood vessels, and are	involved in functions that	include, but are not limited to,	angiogenesis, vascular	permeability, vascular tone,	and immune cell extravasation.	expression of VCAM are well- include inflammation (acute	known in the art and may be and chronic), restnosis,	
204 (	"Lyn	appro	(2000	270(:	and	Immi	(1993)	which	by re	Endo	nsed	are p	throu	Exen	that r	these	l mbi	UH)	endo	veno	lovni	inclu	angic	perm	and i			
									•	•																		

endothelial cells	polypeptides of the invention	indications include
(HUVEC))	(including antibodies and	inflammation and
	agonists or antagonists of the	inflammatory disorders,
	invention) to regulate VCAM	immunological disorders,
	expression. For example,	neoplastic disorders (e.g.
	FMAT may be used to meaure	cancer/tumorigenesis), and
	the upregulation of cell surface	cardiovascular disorders (such
	VCAM-1 expresssion in	as described below under
	endothelial cells. Endothelial	"Immune Activity", "Blood-
	cells are cells that line blood	Related Disorders",
	vessels, and are involved in	"Hyperproliferative Disorders"
	functions that include, but are	and/or "Cardiovascular
	not limited to, angiogenesis,	Disorders"). Highly preferred
	vascular permeability, vascular	indications include neoplasms
	tone, and immune cell	and cancers such as, for
	extravasation. Exemplary	example, leukemia, lymphoma,
	endothelial cells that may be	melanoma, renal cell
	used according to these assays	carcinoma, and prostate,
	include human umbilical vein	breast, lung, colon, pancreatic,
	endothelial cells (HUVEC),	esophageal, stomach, brain,
	which are available from	liver and urinary cancer. Other
	commercial sources. The	preferred indications include
	expression of VCAM	benign dysproliferative
	(CD106), a membrane-	disorders and pre-neoplastic
	associated protein, can be	conditions, such as, for
	upregulated by cytokines or	example, hyperplasia,
	other factors, and contributes	metaplasia, and/or dysplasia.
	to the extravasation of	
	lymphocytes, leucocytes and	
	other immune cells from blood	
	vessels; thus VCAM	

				expression plays a role in promoting immune and inflammatory responses.	
512	HSQEO84	1460	SEAP in Senescence Assay		
	HSSAJ29	1461	Activation of	Assays for the activation of	Preferred indications
513			transcription	transcription through the AP1	include neoplastic diseases
			through AP1	response element are known in	(e.g., as described below under
			response element in	the art and may be used or	"Hyperproliferative
			immune cells (such	routinely modified to assess	Disorders"), blood disorders
			as T-cells).	the ability of polypeptides of	(e.g., as described below under
_				the invention (including	"Immune Activity",
				antibodies and agonists or	"Cardiovascular Disorders",
				antagonists of the invention) to	and/or "Blood-Related
				modulate growth and other cell	Disorders"), and infection
. —				functions. Exemplary assays	(e.g., an infectious disease as
				for transcription through the	described below under
				AP1 response element that	"Infectious Disease"). Highly
				may be used or routinely	preferred indications include
				modified to test AP1-response	autoimmune diseases (e.g.,
				element activity of	rheumatoid arthritis, systemic
				polypeptides of the invention	lupus erythematosis, multiple
				(including antibodies and	sclerosis and/or as described
				agonists or antagonists of the	below) and
				invention) include assays	immunodeficiencies (e.g., as
				disclosed in Berger et al., Gene	described below). Additional
				66:1-10 (1988); Cullen and	highly preferred indications
				Malm, Methods in Enzymol	include inflammation and
				216:362-368 (1992); Henthorn	inflammatory disorders.
				et al., Proc Natl Acad Sci USA	Highly preferred indications
				85:6342-6346 (1988);	also include neoplastic

	Rellahan et al., J Biol Chem	diseases (e.g., leukemia,
	272(49):30806-30811 (1997);	lymphoma, and/or as described
	Chang et al., Mol Cell Biol	below under
	18(9):4986-4993 (1998); and	"Hyperproliferative
	 Fraser et al., Eur J Immunol	Disorders"). Highly preferred
	29(3):838-844 (1999), the	indications include neoplasms
	contents of each of which are	and cancers, such as, leukemia,
-	herein incorporated by	lymphoma, prostate, breast,
	reference in its entirety. T	lung, colon, pancreatic,
	 cells that may be used	esophageal, stomach, brain,
	 according to these assays are	liver, and urinary cancer. Other
	publicly available (e.g.,	preferred indications include
	through the ATCC).	benign dysproliferative
	Exemplary mouse T cells that	disorders and pre-neoplastic
	may be used according to these	conditions, such as, for
	assays include the CTLL cell	example, hyperplasia,
	 line, which is an IL-2	metaplasia, and/or dysplasia.
	dependent suspension-culture	Preferred indications include
	 cell line with cytotoxic	arthritis, asthma, AIDS,
	activity.	allergy, anemia, pancytopenia,
		leukopenia, thrombocytopenia,
		Hodgkin's disease, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		granulomatous disease,
		inflammatory bowel disease,
		sepsis, psoriasis, suppression
		of immune reactions to
		transplanted organs and
		tissues, endocarditis,

					meningitis, and Lyme Disease.
	HSSDX51	1462	Production of IL-6	IL-6 FMAT. IL-6 is produced	A highly preferred
514				by T cells and has strong	embodiment of the invention
				effects on B cells. IL-6	includes a method for
				participates in IL-4 induced	stimulating (e.g., increasing)
				IgE production and increases	IL-6 production. An alternative
				IgA production (IgA plays a	highly preferred embodiment
				role in mucosal immunity).	of the invention includes a
				IL-6 induces cytotoxic T cells.	method for inhibiting (e.g.,
				Deregulated expression of IL-6	reducing) IL-6 production. A
				has been linked to autoimmune	highly preferrred indication is
				disease, plasmacytomas,	the stimulation or enhancement
	-			myelomas, and chronic	of mucosal immunity. Highly
				hyperproliferative diseases.	preferred indications include
				Assays for immunomodulatory	blood disorders (e.g., as
				and differentiation factor	described below under
				proteins produced by a large	"Immune Activity", "Blood-
				variety of cells where the	Related Disorders", and/or
				expression level is strongly	"Cardiovascular Disorders"),
				regulated by cytokines, growth	and infection (e.g., as
				factors, and hormones are well	described below under
				known in the art and may be	"Infectious Disease"). Highly
				used or routinely modified to	preferred indications include
				assess the ability of	autoimmune diseases (e.g.,
				polypeptides of the invention	rheumatoid arthritis, systemic
				(including antibodies and	lupus erythematosis, multiple
				agonists or antagonists of the	sclerosis and/or as described
				invention) to mediate	below) and
				immunomodulation and	immunodeficiencies (e.g., as
				differentiation and modulate T	described below). Highly
				cell proliferation and function.	preferred indications also

	Exemplary assays that test for	include boosting a B cell-
	immunomodulatory proteins	mediated immune response
	evaluate the production of	and alternatively suppressing a
	cytokines, such as IL-6, and	B cell-mediated immune
	the stimulation and	response. Highly preferred
	upregulation of T cell	indications include
	proliferation and functional	inflammation and
	activities. Such assays that	inflammatory
	may be used or routinely	disorders. Additional highly
	modified to test	preferred indications include
	immunomodulatory and	asthma and allergy. Highly
	diffferentiation activity of	preferred indications include
	polypeptides of the invention	neoplastic diseases (e.g.,
	(including antibodies and	myeloma, plasmacytoma,
	agonists or antagonists of the	leukemia, lymphoma,
	invention) include assays	melanoma, and/or as described
	disclosed in Miraglia et al., J	below under
	Biomolecular Screening 4:193-	"Hyperproliferative
	204(1999); Rowland et al.,	Disorders"). Highly preferred
	"Lymphocytes: a practical	indications include neoplasms
	approach" Chapter 6:138-160	and cancers, such as, myeloma,
	(2000); and Verhasselt et al., J	plasmacytoma, leukemia,
	Immunol 158:2919-2925	lymphoma, melanoma, and
	(1997), the contents of each of	prostate, breast, lung, colon,
	which are herein incorporated	pancreatic, esophageal,
	by reference in its entirety.	stomach, brain, liver and
-	Human dendritic cells that may	urinary cancer. Other preferred
	be used according to these	indications include benign
	assays may be isolated using	dysproliferative disorders and
	techniques disclosed herein or	pre-neoplastic conditions, such
	otherwise known in the art.	as, for example, hyperplasia,

				Human dendritic cells are	metaplasia, and/or dysplasia.
				antigen presenting cells in	Preferred indications include
				suspension culture, which,	anemia, pancytopenia,
				when activated by antigen	leukopenia, thrombocytopenia,
				and/or cytokines, initiate and	Hodgkin's disease, acute
				upregulate T cell proliferation	lymphocytic anemia (ALL),
				and functional activities.	multiple myeloma, Burkitt's
					lymphoma, arthritis, AIDS,
					granulomatous disease,
					inflammatory bowel disease,
					sepsis, neutropenia,
					neutrophilia, psoriasis,
					suppression of immune
					reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
_					diabetes mellitus, endocarditis,
					meningitis, and Lyme Disease.
					An additonal preferred
					indication is infection (e.g., an
					infectious disease as described
					below under "Infectious
					Disease").
	HSSFT08	1463	Activation of	Assays for the activation of	A preferred embodiment of
515			transcription	transcription through the	the invention includes a
			through serum	Serum Response Element	method for inhibiting (e.g.,
			response element in	(SRE) are well-known in the	reducing) TNF alpha
			immune cells (such	art and may be used or	production. An alternative
			as T-cells).	routinely modified to assess	preferred embodiment of the
				the ability of polypeptides of	invention includes a method
				the invention (including	for stimulating (e.g.,

an a	antibodies and agonists or antagonists of the invention) to regulate the serum response factors and modulate the expression of genes involved in growth. Exemplary assays for transcription through the SRE that may be used or routinely modified to test SRE activity of the polypeptides of the invention (including antibodies and agonists or	increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"), Highly preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lubus erythematosis.
m. in an	antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm, Methods in Enzymol 216:362-368 (1992); Henthorn et al., Proc Natl Acad Sci USA 85:6342-6346 (1988); and	Crohn"s disease, multiple sclerosis and/or as described below), immunodeficiencies (e.g., as described below), boosting a T cell-mediated immune response, and suppressing a T cell-mediated immune response. Additional
B 17 17 18 18 18 18 18 18	Black et al., Virus Genes 12(2):105-117 (1997), the content of each of which are herein incorporated by reference in its entirety. T cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary mouse T cells that may be used according to these	highly preferred indications include inflammation and inflammatory disorders, and treating joint damage in patients with rheumatoid arthritis. An additional highly preferred indication is sepsis. Highly preferred indications include neoplastic diseases (e.g., leukemia, lymphoma, and/or as described below

TL cell	dependent suspension culture highly preferred indications			leukemia, lymphoma,	melanoma, glioma (e.g.,	malignant glioma), solid	tumors, and prostate, breast,	lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other	preferred indications include	benign dysproliferative	disorders and pre-neoplastic	conditions, such as, for	example, hyperplasia,	metaplasia, and/or dysplasia.	Preferred indications include	anemia, pancytopenia,	leukopenia, thrombocytopenia,	Hodgkin's disease, acute	lymphocytic anemia (ALL),	plasmacytomas, multiple	myeloma, Burkitt's lymphoma,	arthritis, AIDS, granulomatous	disease, inflammatory bowel	disease, neutropenia,	neutrophilia, psoriasis,	suppression of immune
assays incl	line, wnich dependent	of T cells v	activity.							•									_									
			-					-																				

1464 Activation of This reporter assay measures transcription activation of the GATA-3 through GATA-3 signaling pathway in HMC-1 response element in human mast cell line.  immune cells (such activation of GATA-3 in mast as mast cells).  cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the GATA3 response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to
HSSGD52 1464

		dorroloumont Drommlour	in a constant proposition of a constant
-		development, Exemplary	ilililiullouelleles (e.g., as
		assays for transcription	described below). Preferred
		through the GATA3 response	indications include neoplastic
		element that may be used or	diseases (e.g., leukemia,
		routinely modified to test	lymphoma, melanoma,
		GATA3-response element	prostate, breast, lung, colon,
		activity of polypeptides of the	pancreatic, esophageal,
		invention (including antibodies	stomach, brain, liver, and
		and agonists or antagonists of	urinary tract cancers and/or as
		the invention) include assays	described below under
		disclosed in Berger et al., Gene	"Hyperproliferative
		66:1-10 (1998); Cullen and	Disorders"). Other preferred
		Malm, Methods in Enzymol	indications include benign
		216:362-368 (1992); Henthorn	dysproliferative disorders and
		et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such
		85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
		et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
		Quant Biol 64:563-571 (1999);	Preferred indications include
		Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
		J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
		(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
		Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
		Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
		14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
		contents of each of which are	lymphoma, arthritis, AIDS,
		herein incorporated by	granulomatous disease,
		reference in its entirety. Mast	inflammatory bowel disease,
		cells that may be used	sepsis, neutropenia,
		according to these assays are	neutrophilia, psoriasis,
		publicly available (e.g.,	suppression of immune
		through the ATCC).	reactions to transplanted

			Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.	organs and tissues, hemophilia, hypercoagulation, diabetes mellitus, endocarditis, meningitis, and Lyme Disease.
HSSGD52	1464	Activation of transcription through NFAT response element in immune cells (such as mast cells).	This reporter assay measures activation of the NFAT signaling pathway in HMC-1 human mast cell line. Activation of NFAT in mast cells has been linked to cytokine and chemokine production. Assays for the activation of transcription through the Nuclear Factor of Activated T cells (NFAT) response element are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate NFAT transcription factors and	Highly preferred indications include allergy, asthma, and rhinitis. Additional preferred indications include infection (e.g., an infectious disease as described below under "Infectious Disease"), and inflammation and inflammatory disorders. Preferred indications also include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and/or as described

	involved in	immunodeficiencies (e.g., as
	immunomodulatory functions.	described below). Preferred
	Exemplary assays for	indications include neoplastic
	transcription through the	diseases (e.g., leukemia,
	NFAT response element that	lymphoma, melanoma,
	may be used or routinely	prostate, breast, lung, colon,
	modified to test NFAT-	pancreatic, esophageal,
	response element activity of	stomach, brain, liver, and
	polypeptides of the invention	urinary tract cancers and/or as
	(including antibodies and	described below under
	agonists or antagonists of the	"Hyperproliferative
	invention) include assays	Disorders"). Other preferred
	disclosed in Berger et al., Gene	indications include benign
	66:1-10 (1998); Cullen and	dysproliferative disorders and
	Malm, Methods in Enzymol	pre-neoplastic conditions, such
	216:362-368 (1992); Henthorn	as, for example, hyperplasia,
	et al., Proc Natl Acad Sci USA	metaplasia, and/or dysplasia.
	85:6342-6346 (1988); De Boer	Preferred indications include
	et al., Int J Biochem Cell Biol	anemia, pancytopenia,
	31(10):1221-1236 (1999); Ali	leukopenia, thrombocytopenia,
	et al., J Immunol	leukemias, Hodgkin's disease,
	165(12):7215-7223 (2000);	acute lymphocytic anemia
	Hutchinson and McCloskey, J	(ALL), plasmacytomas,
	Biol Chem 270(27):16333-	multiple myeloma, Burkitt's
	16338 (1995), and Turner et	lymphoma, arthritis, AIDS,
	al., J Exp Med 188:527-537	granulomatous disease,
	(1998), the contents of each of	inflammatory bowel disease,
 	which are herein incorporated	sepsis, neutropenia,
	by reference in its entirety.	neutrophilia, psoriasis,
	Mast cells that may be used	suppression of immune
	according to these assays are	reactions to transplanted

Exemplary that may be these assay.  I cell line, immature h established blood of a p cell leukem many chara immature n immature n adipose cells (such as 3T3-L1 cells)  Cells in vitro the art and a routinely many cells in vitro the art and a routinely many cells in vitro the art and a routinely many cells and ce cells and cells					publicly available (e.g., through the ATCC).	organs and tissues, hemophilia, hypercoagulation, diabetes
1464 Proliferation of preadipose cells (such as 3T3-L1 cells)					Exemplary human mast cells	mellitus, endocarditis,
1464 Proliferation of preadipose cells (such as 3T3-L1 cells)					that may be used according to	meningitis, and Lyme Disease.
1464 Proliferation of preadipose cells (such as 3T3-L1 cells)					these assays include the HMC-	
Proliferation of preadipose cells (such as 3T3-L1 cells)					1 cell line, which is an	
Proliferation of preadipose cells (such as 3T3-L1 cells)		-			immature human mast cell line	
Proliferation of preadipose cells (such as 3T3-L1 cells)	_				established from the peripheral	
Proliferation of preadipose cells (such as 3T3-L1 cells)					blood of a patient with mast	
1464 Proliferation of preadipose cells (such as 3T3-L1 cells)					cell leukemia, and exhibits	
1464 Proliferation of preadipose cells (such as 3T3-L1 cells)					many characteristics of	
1464 Proliferation of preadipose cells (such as 3T3-L1 cells)					immature mast cells.	
		HSSGD52	1464	Proliferation of pre-	Assays for the regulation (i.e.	
				adipose cells (such	increases or decreases) of	
cells in vitrathe art and 1 routinely m the ability of the invention antibodies antagonists regulate via proliferation cells and ce example, the Luminescer Assay (Proi Madison, W used to mea				as 3T3-L1 cells)	viability and proliferation of	
the art and a routinely m the ability of the invention antibodies a antagonists regulate via proliferation cells and ce example, the Luminescer Assay (Pror Madison, W used to mea					cells in vitro are well-known in	
routinely m the ability c the inventio antibodies a antagonists regulate via proliferation cells and ce example, th Luminescer Assay (Prot Madison, W used to mea					the art and may be used or	
the ability of the invention antibodies antibodies antagonists regulate via proliferation cells and ce example, the Luminescer Assay (Prot Madison, Wadison, Wadison, West to mea					routinely modified to assess	
the inventic antibodies antibodie					the ability of polypeptides of	
antibodies a antagonists regulate via proliferation cells and ce example, th Luminescer Assay (Proi Madison, W used to mea					the invention (including	
antagonists regulate via proliferation cells and ce example, th Luminescer Assay (Prot Madison, W used to mea					antibodies and agonists or	
regulate via proliferation cells and ce example, th Luminescer Assay (Proi Madison, W used to mea					antagonists of the invention) to	
proliferation cells and ce example, th Luminescer Assay (Proi Madison, W					regulate viability and	
cells and ce example, th Luminescer Assay (Prot Madison, W used to mea					proliferation of pre-adipose	
Example, the Luminescen Assay (Prot Madison, W					cells and cell lines. For	
Luminescer Assay (Prot Madison, W					example, the CellTiter-Gloô	
Assay (Proi Madison, W used to mea					Luminescent Cell Viability	
Madison, W used to mea					Assay (Promega Corp.,	
used to mea					Madison, WI, USA) can be	
					used to measure the number of	
viable cells					viable cells in culture based on	

		A preferred embodiment of the invention includes a method for inhibiting (e.g., reducing) TNF alpha production. An alternative highly preferred embodiment of the invention includes a method for stimulating (e.g., increasing) TNF alpha production. Preferred indications include blood disorders (e.g., as described below under "Immune Activity", "Blood-Related
quantitation of the ATP present which signals the presence of metabolically active cells. 3T3-L1 is a mouse preadipocyte cell line. It is a continuous substrain of 3T3 fibroblast cells developed through clonal isolation. Cells were differentiated to an adipose-like state before being used in the screen. See Green H and Meuth M., Cell 3: 127-133 (1974), which is herein incorporated by reference in its entirety.		Assays for the activation of transcription through the Serum Response Element (SRE) are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate serum response factors and modulate the expression of genes involved in growth and upregulate the
	IL-2 in Human T-cell 293T	Activation of transcription through serum response element in immune cells (such as natural killer cells).
	1464	1464
	HSSGD52	HSSGD52
	516	516

function of growth-related	Disorders", and/or
genes in many cell types.	"Cardiovascular Disorders"),
Exemplary assays for	Highly preferred indications
 transcription through the SRE	include autoimmune diseases
that may be used or routinely	(e.g., rheumatoid arthritis,
modified to test SRE activity	systemic lupus erythematosis,
of the polypeptides of the	Crohn"s disease, multiple
invention (including antibodies	sclerosis and/or as described
and agonists or antagonists of	below), immunodeficiencies
the invention) include assays	(e.g., as described below),
disclosed in Berger et al., Gene	boosting a T cell-mediated
66:1-10 (1998); Cullen and	immune response, and
Malm, Methods in Enzymol	suppressing a T cell-mediated
 216:362-368 (1992); Henthorn	immune response. Additional
et al., Proc Natl Acad Sci USA	highly preferred indications
85:6342-6346 (1988); Benson	include inflammation and
et al., J Immunol 153(9):3862-	inflammatory disorders, and
3873 (1994); and Black et al.,	treating joint damage in
Virus Genes 12(2):105-117	patients with rheumatoid
(1997), the content of each of	arthritis. An additional highly
which are herein incorporated	preferred indication is sepsis.
by reference in its entirety. T	Highly preferred indications
cells that may be used	include neoplastic diseases
according to these assays are	(e.g., leukemia, lymphoma,
publicly available (e.g.,	and/or as described below
through the ATCC).	under "Hyperproliferative
Exemplary T cells that may be	Disorders"). Additionally,
used according to these assays	highly preferred indications
include the NK-YT cell line,	include neoplasms and
which is a human natural killer	cancers, such as, for example,
cell line with cytolytic and	leukemia, lymphoma,

	cytotoxic activity.	melanoma, glioma (e.g.,
		malignant glioma), solid
		tumors, and prostate, breast,
		lung, colon, pancreatic,
		esophageal, stomach, brain,
		liver and urinary cancer. Other
		preferred indications include
		benign dysproliferative
		disorders and pre-neoplastic
		conditions, such as, for
		example, hyperplasia,
		metaplasia, and/or dysplasia.
		Preferred indications include
		anemia, pancytopenia,
		leukopenia, thrombocytopenia,
		Hodgkin's disease, acute
		lymphocytic anemia (ALL),
		plasmacytomas, multiple
		myeloma, Burkitt's lymphoma,
		arthritis, AIDS, granulomatous
-		disease, inflammatory bowel
		disease, neutropenia,
		neutrophilia, psoriasis,
		suppression of immune
		reactions to transplanted
		organs and tissues, hemophilia,
		hypercoagulation, diabetes
		mellitus, endocarditis,
		meningitis, Lyme Disease,
		cardiac reperfusion injury, and
		asthma and allergy. An

					additional preferred indication is infection (e.g., an infectious disease as described below under "Infectious Disease").
516	HSSGD52	1464	Activation of transcription through STAT6	Assays for the activation of transcription through the Signal Transducers and	A highly preferred indication is allergy. Another highly preferred
			response element in immune cells (such as T-cells).	Activators of Transcription (STAT6) response element are well-known in the art and may be used or routinely modified to assess the ability of	indication is asthma. Additional highly preferred indications include inflammation and inflammatory disorders.
				polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate STAT6	Preferred indications include blood disorders (e.g., as described below under "Immune Activity" "Blood-
				transcription factors and modulate the expression of multiple genes. Exemplary assays for transcription the STAT6 response	Related Disorders", and/or "Cardiovascular Disorders"). Preferred indications include autoimmune diseases (e.g., rheumatoid arthritis, systemic
				element that may be used or routinely modified to test STAT6 response element activity of the polypeptides of the invention (including	lupus erythematosis, multiple sclerosis and/or as described below) and immunodeficiencies (e.g., as described below).
				antagonists of the invention) include assays disclosed in Berger et al., Gene 66:1-10 (1998); Cullen and Malm,	neoplastic diseases (e.g., leukemia, lymphoma, melanoma, and/or as described below under

		Methods in Enzymol 216:362-	"Hyperproliferative
		368 (1992): Henthorn et al	Disorders") Preferred
		Droc Notl Acad Sci HSA	indications include neonlessing
		of Caro Caro Caro	mulcations include neoplasms
	-	85:6342-6346 (1988); Georas	and cancers, such as, leukemia,
		et al., Blood 92(12):4529-4538	lymphoma, melanoma, and
		(1998); Moffatt et al.,	prostate, breast, lung, colon,
		Transplantation 69(7):1521-	pancreatic, esophageal,
		1523 (2000); Curiel et al., Eur	stomach, brain, liver and
		J Immunol 27(8):1982-1987	urinary cancer. Other preferred
		(1997); and Masuda et al., J	indications include benign
		Biol Chem 275(38):29331-	dysproliferative disorders and
		29337 (2000), the contents of	pre-neoplastic conditions, such
		each of which are herein	as, for example, hyperplasia,
		incorporated by reference in its	metaplasia, and/or dysplasia.
		entirety. T cells that may be	Preferred indications include
		used according to these assays	anemia, pancytopenia,
		are publicly available (e.g.,	leukopenia, thrombocytopenia,
		through the ATCC).	Hodgkin's disease, acute
		Exemplary T cells that may be	lymphocytic anemia (ALL),
		used according to these assays	plasmacytomas, multiple
		include the SUPT cell line,	myeloma, Burkitt's lymphoma,
		which is a suspension culture	arthritis, AIDS, granulomatous
		of IL-2 and IL-4 responsive T	disease, inflammatory bowel
		cells.	disease, sepsis, neutropenia,
-			neutrophilia, psoriasis,
			suppression of immune
			reactions to transplanted
			organs and tissues,
			hemophilia, hypercoagulation,
	-		diabetes mellitus, endocarditis,
			meningitis, and Lyme Disease.

HSSGG82	Apoptosis Caspase Apoptosis known i used or assess the polypep (including agonists invention protease Induction protease Induction protease invention invent	Caspase Apoptosis. Assays for caspase apoptosis are well known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to promote caspase protease-mediated apoptosis. Induction of apoptosis in endothelial cells supporting the vasculature of tumors is associated with tumor regression due to loss of tumor blood supply. Exemplary assays for caspase apoptosis that may be used or routinely	indication is infection (e.g., an infectious disease as described below under "Infectious Disease").  A highly preferred embodiment of the invention includes a method for stimulating endothelial cell growth. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell growth. A highly preferred embodiment of the invention includes a method for stimulating endothelial cell proliferation. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell proliferation. An alternative highly preferred embodiment of the invention includes a method for inhibiting endothelial cell proliferation.  A highly preferred
	modifie apoptos polypep (includi agonists inventio disclose Lett 485	modified to test capase apoptosis activity of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) include the assays disclosed in Lee et al., FEBS Lett 485(2-3): 122-126 (2000);	embodiment of the invention includes a method for stimulating apoptosis of endothelial cells. An alternative highly preferred embodiment of the invention includes a method for inhibiting (e.g., decreasing)

	Nor et al., J Vasc Res 37(3):	apoptosis of endothelial cells.	
	209-218 (2000); and Karsan	A highly preferred	
	and Harlan, J Atheroscler	embodiment of the invention	
	Thromb 3(2): 75-80 (1996);	includes a method for	
	the contents of each of which	stimulating angiogenisis. An	
	are herein incorporated by	alternative highly preferred	
	reference in its entirety.	embodiment of the invention	
	Endothelial cells that may be	includes a method for	
	used according to these assays	inhibiting angiogenesis. A	
	are publicly available (e.g.,	highly preferred embodiment	
	through commercial sources).	of the invention includes a	
	Exemplary endothelial cells	method for reducing cardiac	
	that may be used according to	hypertrophy. An alternative	
	these assays include bovine	highly preferred embodiment	
	aortic endothelial cells	of the invention includes a	
	(bAEC), which are an example	method for inducing cardiac	
	of endothelial cells which line	hypertrophy. Highly	
	blood vessels and are involved	preferred indications include	
	in functions that include, but	neoplastic diseases (e.g., as	
	are not limited to,	described below under	
	angiogenesis, vascular	"Hyperproliferative	
	permeability, vascular tone,	Disorders"), and disorders of	
	and immune cell extravasation.	the cardiovascular system	
		(e.g., heart disease, congestive	
		heart failure, hypertension,	
		aortic stenosis,	
		cardiomyopathy, valvular	
-		regurgitation, left ventricular	
		dysfunction, atherosclerosis	
		and atherosclerotic vascular	
		disease, diabetic nephropathy.	

intracardiac shunt, cardiac hypertrophy, myocardial	infarction, chronic hemodynamic overload, and/or	as described below under	Highly preferred indications	include cardiovascular,	endothelial and/or angiogenic	disorders (e.g., systemic	disorders that affect vessels	such as diabetes mellitus, as	well as diseases of the vessels	themselves, such as of the	arteries, capillaries, veins	and/or lymphatics). Highly	preferred are indications that	stimulate angiogenesis and/or	cardiovascularization. Highly	preferred are indications that	inhibit angiogenesis and/or	cardiovascularization.	Highly preferred indications	include antiangiogenic activity	to treat solid tumors,	leukemias, and Kaposi"s	sarcoma, and retinal disorders.	Highly preferred indications	include neoplasms and cancer,	such as, Kaposi"s sarcoma,	hemangioma (capillary and

	cavernous), glomus tumors,
	tetatigrectasia, bacillary angiomatosis,
	hemangioendothelioma,
	angiosarcoma,
	haemangiopericytoma,
	Iymphangioma,
	lymphangiosarcoma. Highly
	preferred indications also
	include cancers such as,
	prostate, breast, lung, colon,
	pancreatic, esophageal,
	stomach, brain, liver, and
	urinary cancer. Preferred
	indications include benign
	dysproliferative disorders and
	pre-neoplastic conditions, such
	as, for example, hyperplasia,
	metaplasia, and/or dysplasia.
	Highly preferred indications
	also include arterial disease,
	such as, atherosclerosis,
-	hypertension, coronary artery
	disease, inflammatory
	vasculitides, Reynaud"s
	disease and Reynaud"s
	phenomenom, aneurysms,
	restenosis; venous and
	lymphatic disorders such as
	thrombophlebitis,
	lymphangitis, and

lymphedema; and other
vascular disorders such as
peripheral vascular disease,
and cancer. Highly
preferred indications also
include trauma such as
wounds, burns, and injured
tissue (e.g., vascular injury
such as, injury resulting from
balloon angioplasty, and
atheroschlerotic lesions),
implant fixation, scarring,
ischemia reperfusion injury,
rheumatoid arthritis,
cerebrovascular disease, renal
diseases such as acute renal
failure, and osteoporosis.
Additional highly preferred
indications include stroke,
graft rejection, diabetic or
other retinopathies, thrombotic
and coagulative disorders,
vascularitis, lymph
angiogenesis, sexual disorders,
age-related macular
degeneration, and treatment
/prevention of endometriosis
and related conditions.
Additional highly preferred
indications include fibromas,
heart disease, cardiac arrest,

HSSJC35 1466 Regulation of apoptosis of immune cells (such as mast cells).		heart valve disease, and
1466		vascular disease.
1466		Preferred indications include
1466		blood disorders (e.g., as
1466		described below under
1466		"Immune Activity", "Blood-
1466		Related Disorders", and/or
1466		"Cardiovascular Disorders").
1466		Preferred indications include
1466		autoimmune diseases (e.g.,
1466		rheumatoid arthritis, systemic
1466		lupus erythematosis, multiple
1466		sclerosis and/or as described
1466		below) and
1466		immunodeficiencies (e.g., as
1466		described below). Additional
1466		preferred indications include
1466		inflammation and
1466		inflammatory disorders (such
1466		as acute and chronic
1466		inflammatory diseases, e.g.,
1466		inflammatory bowel disease
1466		and Crohn's disease), and pain
1466		management.
apoptosis of immune cells (such as mast cells).	Caspase Apoptosis. Assays for	Preferred embodiments of the
immune cells (such as mast cells).	caspase apoptosis are well	invention include using
as mast cells).	ch   known in the art and may be	polypeptides of the invention
	used or routinely modified to	(or antibodies, agonists, or
	assess the ability of	antagonists thereof) in
	polypeptides of the invention	detection, diagnosis,
	(including antibodies and	prevention, and/or treatment of

asthma, allergy,	inflammation.																												
agonists or antagonists of the invention) to regulate caspage	protease-mediated apoptosis in	immune cells (such as, for	example, in mast cells). Mast	cells are found in connective	and mucosal tissues throughout	the body, and their activation	via immunoglobulin E -	antigen, promoted by T helper	cell type 2 cytokines, is an	important component of	allergic disease. Dysregulation	of mast cell apoptosis may	play a role in allergic disease	and mast cell tumor survival.	Exemplary assays for caspase	apoptosis that may be used or	routinely modified to test	capase apoptosis activity	induced by polypeptides of the	invention (including antibodies	and agonists or antagonists of	the invention) include the	assays disclosed in: Masuda A,	et al., J Biol Chem,	276(28):26107-26113 (2001);	Yeatman CF 2nd, et al., J Exp	Med, 192(8):1093-1103	(2000); Lee et al., FEBS Lett	485(2-3): 122-126 (2000); Nor
											<i>,,</i>																		
		-																											

an and Thromb hich are hich are y y y be used ays are sy, ources). ells that g to these ells such nast cell		ion (i.e. s) of tion of known in ed or assess tides of ng ts or ention) to lipose or
et al., J Vasc Res 37(3): 209-218 (2000); and Karsan and Harlan, J Atheroscler Thromb 3(2): 75-80 (1996); the contents of each of which are herein incorporated by reference in its entirety. Immune cells that may be used according to these assays are publicly available (e.g., through commercial sources). Exemplary immune cells that may be used according to these assays include mast cells such as the HMC human mast cell line.		Assays for the regulation (i.e. increases or decreases) of viability and proliferation of cells in vitro are well-known in the art and may be used or routinely modified to assess the ability of polypeptides of the invention (including antibodies and agonists or antagonists of the invention) to regulate viability and proliferation of pre-adipose cells and cell lines. For
	IL-2 in Human T-cell 2B9	Proliferation of preadipose cells (such as 3T3-L1 cells)
	1466	1467
	HSSJC35	HSTBJ86
	518	519

HSTBJ86
TBJ86 1467

agonists or antagonists of the	nephropathy and/or other
invention) to activate the FAS	diseases and disorders as
promoter element in a reporter	described in the "Renal
construct and to regulate	Disorders" section below),
transcription of FAS, a key	diabetic neuropathy, nerve
enzyme for lipogenesis. FAS	disease and nerve damage
promoter is regulated by many	(e.g., due to diabetic
transcription factors including	neuropathy), blood vessel
SREBP. Insulin increases FAS	blockage, heart disease, stroke,
gene transcription in livers of	impotence (e.g., due to diabetic
diabetic mice. This	neuropathy or blood vessel
stimulation of transcription is	blockage), seizures, mental
also somewhat glucose	confusion, drowsiness,
dependent. Exemplary assays	nonketotic hyperglycemic-
that may be used or routinely	hyperosmolar coma,
modified to test for FAS	cardiovascular disease (e.g.,
promoter element activity (in	heart disease, atherosclerosis,
hepatocytes) by polypeptides	microvascular disease,
of the invention (including	hypertension, stroke, and other
antibodies and agonists or	diseases and disorders as
antagonists of the invention)	described in the
include assays disclosed in	"Cardiovascular Disorders"
Xiong, S., et al., Proc Natl	section below), dyslipidemia,
Acad Sci U.S.A., 97(8):3948-	endocrine disorders (as
53 (2000); Roder, K., et al.,	described in the "Endocrine
Eur J Biochem, 260(3):743-51	Disorders" section below),
(1999); Oskouian B, et al.,	neuropathy, vision impairment
Biochem J, 317 ( Pt 1):257-65	(e.g., diabetic retinopathy and
(1996); Berger, et al., Gene	blindness), ulcers and impaired
66:1-10 (1988); and, Cullen,	wound healing, and infection
B., et al., Methods in Enzymol. (e.g., infectious diseases and	(e.g., infectious diseases and

				216:362–368 (1992), the	disorders as described in the
				contents of each of which is	"Infectious Diseases" section
				herein incorporated by	below, especially of the
				reference in its entirety.	urinary tract and skin), carpal
				Hepatocytes that may be used	tunnel syndrome and
				according to these assays, such	Dupuytren's contracture).
				as H4IIE cells, are publicly	An additional highly preferred
				available (e.g., through the	indication is obesity and/or
				ATCC) and/or may be	complications associated with
				routinely generated.	obesity. Additional highly
				Exemplary hepatocytes that	preferred indications include
				may be used according to these	weight loss or alternatively,
				assays include rat liver	weight gain. Aditional
				hepatoma cell line(s) inducible	highly preferred indications are
				with glucocorticoids, insulin,	complications associated with
				or cAMP derivatives.	insulin resistance.
	HSUBW09	1468	Inhibition of	Reporter Assay: construct	
520			squalene synthetase	contains regulatory and coding	
			gene transcription.	sequence of squalene	
				synthetase, the first specific	
				enzyme in the cholesterol	
				biosynthetic pathway. See	
				Jiang, et al., J. Biol. Chem.	
				268:12818-128241(993), the	
				contents of which are herein	
				incorporated by reference in its	
				entirety. Cells were treated	
-				with SID supernatants, and	
				SEAP activity was measured	
				after 72 hours. HepG2 is a	
				human hepatocellular	

				carcinoma cell line (ATCC HB-8065). See Knowles et al., Science. 209:497-9 (1980), the contents of which are herein incorporated by reference in its entirety.	
520	HSUBW09	1468	CD152 in Human T cells		
	HSVAM10	1469	Production of	IFNgamma FMAT. IFNg plays	A highly preferred
175			IFNgamma using a T cells	a central role in the immune system and is considered to be	embodiment of the invention includes a method for
				a proinflammatory cytokine.	stimulating the production of
				IFNg promotes TH1 and	IFNg. An alternative highly
-				inhibits TH2 differentiation;	preferred embodiment of the
				promotes IgG2a and inhibits	invention includes a method
				IgE secretion; induces	for inhibiting the production of
				macrophage activation; and	IFNg. Highly preferred
				increases MHC expression.	indications include blood
				Assays for immunomodulatory	disorders (e.g., as described
				proteins produced by T cells	below under "Immune
				and NK cells that regulate a	Activity", "Blood-Related
·				variety of inflammatory	Disorders", and/or
				activities and inhibit TH2	"Cardiovascular Disorders"),
				helper cell functions are well	and infection (e.g., viral
				known in the art and may be	infections, tuberculosis,
				used or routinely modified to	infections associated with
				assess the ability of	chronic granulomatosus
				polypeptides of the invention	disease and malignant
				(including antibodies and	osteoporosis, and/or as
				agonists or antagonists of the	described below under
				invention) to mediate	"Infectious Disease"). Highly

preferred indications include autoimmune disease (e.g., rheumatoid arthritis, systemic	lupus erythematosis, multiple sclerosis and/or as described	below), immunodeficiency	(e.g., as described below), boosting a T cell-mediated	immune response, and	suppressing a T cell-mediated immine response.	highly preferred indications	include inflammation and	inflammatory disorders.	Additional preferred	indications include idiopathic	pulmonary fibrosis. Highly	preferred indications include	neoplastic diseases (e.g.,	leukemia, lymphoma,		below under	"Hyperproliferative	Disorders"). Highly preferred	indications include neoplasms	and cancers, such as, for	example, leukemia, lymphoma,	melanoma, and prostate,	breast, lung, colon, pancreatic,	esophageal, stomach, brain,	liver and urinary cancer. Other
immunomodulation, regulate inflammatory activities, modulate TH2 helper cell	function, and/or mediate	immunity. Exemplary assays	tnat test 10r immunomodulatory proteins	evaluate the production of	cytokines, such as Interferon	activation of T cells. Such	assays that may be used or	routinely modified to test	immunomodulatory activity of	polypeptides of the invention	(including antibodies and	agonists or antagonists of the	invention) include the assays	disclosed in Miraglia et al., J	Biomolecular Screening 4:193-	204 (1999); Rowland et al.,	"Lymphocytes: a practical	approach" Chapter 6:138-160	(2000); Gonzalez et al., J Clin	Lab Anal 8(5):225-233 (1995);	Billiau et al., Ann NY Acad	Sci 856:22-32 (1998); Boehm	et al., Annu Rev Immunol	15:749-795 (1997), and	Rheumatology (Oxford)
															-										

				38(3):214-20 (1999), the	preferred indications include
	-			contents of each of which are	benign dysproliferative
				herein incorporated by	disorders and pre-neoplastic
				reference in its entirety.	conditions, such as, for
				Human T cells that may be	example, hyperplasia,
				used according to these assays	metaplasia, and/or dysplasia.
				may be isolated using	Preferred indications include
				techniques disclosed herein or	anemia, pancytopenia,
				otherwise known in the art.	leukopenia, thrombocytopenia,
				Human T cells are primary	Hodgkin's disease, acute
				human lymphocytes that	lymphocytic anemia (ALL),
				mature in the thymus and	plasmacytomas, multiple
				express a T Cell receptor and	myeloma, Burkitt's lymphoma,
				CD3, CD4, or CD8. These	arthritis, AIDS, granulomatous
				cells mediate humoral or cell-	disease, inflammatory bowel
				mediated immunity and may	disease, sepsis, neutropenia,
				be preactivated to enhance	neutrophilia, psoriasis,
				responsiveness to	suppression of immune
	•••			immunomodulatory factors.	reactions to transplanted
					organs and tissues,
					hemophilia, hypercoagulation,
-					diabetes mellitus, endocarditis,
					meningitis, Lyme Disease,
					asthma and allergy.
522	HSVAT68	1470	IL-4 in HMC		
	HSVAT68	1470	Activation of	This reporter assay measures	Highly preferred indications
522			transcription	activation of the GATA-3	include allergy, asthma, and
			through GATA-3	signaling pathway in HMC-1	rhinitis. Additional preferred
			response element in	human mast cell line.	indications include infection
			immune cells (such	Activation of GATA-3 in mast	(e.g., an infectious disease as

as mast cells).	cells has been linked to	described below under
	cytokine and chemokine	"Infectious Disease"), and
	production. Assays for the	inflammation and
	activation of transcription	inflammatory disorders.
	through the GATA3 response	Preferred indications also
	element are well-known in the	include blood disorders (e.g.,
	art and may be used or	as described below under
	routinely modified to assess	"Immune Activity", "Blood-
	the ability of polypeptides of	Related Disorders", and/or
	the invention (including	"Cardiovascular Disorders").
	antibodies and agonists or	Preferred indications include
	antagonists of the invention) to	autoimmune diseases (e.g.,
	regulate GATA3 transcription	rheumatoid arthritis, systemic
	factors and modulate	lupus erythematosis, multiple
	expression of mast cell genes	sclerosis and/or as described
	important for immune response	below) and
	development. Exemplary	immunodeficiencies (e.g., as
 	assays for transcription	described below). Preferred
	through the GATA3 response	indications include neoplastic
	element that may be used or	diseases (e.g., leukemia,
	routinely modified to test	lymphoma, melanoma,
	GATA3-response element	prostate, breast, lung, colon,
	activity of polypeptides of the	pancreatic, esophageal,
	invention (including antibodies	stomach, brain, liver, and
	and agonists or antagonists of	urinary tract cancers and/or as
	the invention) include assays	described below under
	disclosed in Berger et al., Gene	"Hyperproliferative
	66:1-10 (1998); Cullen and	Disorders"). Other preferred
	Malm, Methods in Enzymol	indications include benign
	216:362-368 (1992); Henthorn	dysproliferative disorders and
	et al., Proc Natl Acad Sci USA	pre-neoplastic conditions, such

et al., Cold Spring Harb Symp Quant Biol 64:563-571 (1999); Rodriguez-Palmero et al., Eur J Immunol 29(12):3914-3924 (1999); Zheng and Flavell, Cell 89(4):587-596 (1997); and Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC- 1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell Lakemia, and exhibits many characteristics of immature mast cells.  1470 SEAP in Jurkat/IL4 promoter Assays for the activation of					85:6342-6346 (1988); Flavell	as, for example, hyperplasia,
Quant Biol 64:563-571 (1999); Rodriguez-Palmero et al., Eur J Immunol 29(12):3914-3324 (1999); Zheng and Flavell, Cell 89(4):587-596 (1997); and Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells flat may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC- 1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell 12B9 HSVAT68 HSVAT68 HSVB191 HSVB1					et al., Cold Spring Harb Symp	metaplasia, and/or dysplasia.
Rodriguez-Palmero et al., Eur J Immunol 29(12):3914-3324 (1999); Zheng and Flavell, Cell 89(4):587-596 (1997); and Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells find may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC- 1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell 2B9 HSVAT68 HSVAT68 HSVAT68 HSVB191 HSVB					Quant Biol 64:563-571 (1999);	Preferred indications include
Jimmunol 29(12):3914-3924  (1999); Zheng and Flavell, Cell 89(4):587-596 (1997); and Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC- 1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell 289 HSVAT68 1470 IFNg in Human T- cell 289 HSVAT68 1470 SEAP in Jurkat/IL4 promoter Assays for the activation of Assays for the activation of					Rodriguez-Palmero et al., Eur	anemia, pancytopenia,
(1999); Zheng and Flavell,  Cell 89(4):587-596 (1997); and Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC- 1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell 1470 IFNg in Human T- immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4  HSVBI191 1471 Activation of Assays for the activation of					J Immunol 29(12):3914-3924	leukopenia, thrombocytopenia,
Cell 89(4):587-596 (1997); and Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC). Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell line catablished from the peripheral blood of a patient with mast cell 2B9  HSVAT68 1470 IFNg in Human T-1 immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4 promoter Assays for the activation of					(1999); Zheng and Flavell,	leukemias, Hodgkin's disease,
Henderson et al., Mol Cell Biol 14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC- 1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T- cell 2B9 HSVAT68 1470 SEAP in Jurkat/IL4 promoter HSVB191 1471 Activation of Assays for the activation of					Cell 89(4):587-596 (1997); and	acute lymphocytic anemia
14(6):4286-4294 (1994), the contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell lendemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-1 many characteristics of immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4 promoter  HSVB191 1471 Activation of Assays for the activation of					Henderson et al., Mol Cell Biol	(ALL), plasmacytomas,
contents of each of which are herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell sell that may characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-1 immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4 promoter Assays for the activation of Assays for the activation of					14(6):4286-4294 (1994), the	multiple myeloma, Burkitt's
herein incorporated by reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-cell 1289 HSVAT68 1470 SEAP in Jurkat/IL4 promoter HSVBI91 1471 Activation of Assays for the activation of					contents of each of which are	lymphoma, arthritis, AIDS,
reference in its entirety. Mast cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-1 cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4 promoter Assays for the activation of Assays for the activation of					herein incorporated by	granulomatous disease,
cells that may be used according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T- cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4 promoter Assays for the activation of Assays for the activation of					reference in its entirety. Mast	inflammatory bowel disease,
according to these assays are publicly available (e.g., through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-1 immature mast cells.  HSVAT68 1470 SEAP in Jurkat/IL4 promoter Assays for the activation of Assays for the activation of					cells that may be used	sepsis, neutropenia,
hrough the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-  I cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-  Cell 2B9  HSVAT68 1470 SEAP in Jurkat/IL4  HSVAT68 1471 Activation of Assays for the activation of Assays for the activation of					according to these assays are	neutrophilia, psoriasis,
through the ATCC).  Exemplary human mast cells that may be used according to these assays include the HMC-  I cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-  Cell 2B9  HSVAT68 1470 SEAP in Jurkat/IL4  promoter Assays for the activation of Assays for the activation of					publicly available (e.g.,	suppression of immune
Exemplary human mast cells that may be used according to these assays include the HMC-  1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-  HSVAT68 1470 SEAP in Jurkat/IL4 promoter  HSVAT68 1471 Activation of Assays for the activation of					through the ATCC).	reactions to transplanted
HSVAT68 1470 IFNg in Human T- HSVAT68 1470 SEAP in Jurkat/IL4 HSVB191 1471 Activation of Assays for the activation of the assays include the HMC- 1 cell line, which is an immature the HMC- 1 cell line, which is an immature the HMC- 1 cell line, which is an immature the HMC- 1 cell line, which is an immature the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the peripheral blood of a patient with mast cell line established from the stable from the peripheral line established from the line established from					Exemplary human mast cells	organs and tissues, hemophilia,
these assays include the HMC-  1 cell line, which is an immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T- cell 2B9  HSVAT68 1470 SEAP in Jurkat/IL4 promoter  Bromoter  HSVB191 1471 Activation of Assays for the activation of					that may be used according to	hypercoagulation, diabetes
HSVAT68 1470 IFNg in Human T-  HSVAT68 1470 SEAP in Jurkat/IL4  HSVB191 1471 Activation of Assays for the activation of					these assays include the HMC-	mellitus, endocarditis,
immature human mast cell line established from the peripheral blood of a patient with mast cell leukemia, and exhibits many characteristics of immature mast cells.  HSVAT68 1470 IFNg in Human T-cell 2B9 HSVAT68 1470 SEAP in Jurkat/IL4 promoter HSVB191 1471 Activation of Assays for the activation of					1 cell line, which is an	meningitis, and Lyme Disease.
HSVAT68 1470 SEAP in Jurkat/IL4 HSVB191 1471 Activation of HSVB191 1471 Activation of HSVB191 1471 Activation of HSVB191 1471 Activation of HSSAVS for the activation of HSVB191 1471 Activation of HSSAVS for the activation of HSVB191 1471					immature human mast cell line	
HSVAT68 1470 IFNg in Human T-  HSVAT68 1470 SEAP in Jurkat/IL4  HSVB191 1471 Activation of Assavs for the activation of					established from the peripheral	
HSVAT68 1470 IFNg in Human T- cell 2B9 HSVAT68 1470 SEAP in Jurkat/IL4 promoter HSVB191 1471 Activation of Assavs for the activation of					blood of a patient with mast	
HSVAT68 1470 IFNg in Human T- cell 2B9 HSVAT68 1470 SEAP in Jurkat/IL4 promoter HSVB[191 1471 Activation of Assavs for the activatio					cell leukemia, and exhibits	
HSVAT68 1470 IFNg in Human T- cell 2B9 HSVAT68 1470 SEAP in Jurkat/IL4 promoter HSVB191 1471 Activation of Assavs for the activation of					many characteristics of	
HSVAT68         1470         IFNg in Human T-           cell 2B9         cell 2B9           HSVAT68         1470         SEAP in Jurkat/IL4           promoter         promoter           HSVB191         1471         Activation of Activation Activation of Activation of Activation October Activation Ac					immature mast cells.	
HSVAT68 1470 SEAP in Jurkat/IL4 promoter promoter Assays for the activation of promoter Assays for the activation of promoter promoter activation of promoter promoter promoter activation of promoter pr		HSVAT68	1470	IFNg in Human T-		
HSVAT68 1470 SEAP in Jurkat/IL4 promoter promoter Assavs for the activation of promoter Assavs for the activation of promoter promoter activation of promoter promoter promoter activation of promoter pr	522			cell 2B9		
HSVB[191 1471 Activation of Assavs for the activation of		HSVAT68	1470	SEAP in Jurkat/IL4		
1471 Activation of Assays for the activation of	522			promoter		
		HSVBU91	1471	Activation of	Assays for the activation of	A highly preferred indication

523		transcription	transcription through the	is obesity and/or complications
		through cAMP	cAMP response element are	associated with obesity.
		response element	well-known in the art and may	Additional highly preferred
		(CRE) in pre-	be used or routinely modified	indications include weight loss
		adipocytes.	to assess the ability of	or alternatively, weight gain.
			polypeptides of the invention	An additional highly preferred
-		-	(including antibodies and	indication is diabetes mellitus.
			agonists or antagonists of the	An additional highly preferred
			invention) to increase cAMP,	indication is a complication
			regulate CREB transcription	associated with diabetes (e.g.,
			factors, and modulate	diabetic retinopathy, diabetic
			expression of genes involved	nephropathy, kidney disease
			in a wide variety of cell	(e.g., renal failure,
			functions. For example, a	nephropathy and/or other
	-		3T3-L1/CRE reporter assay	diseases and disorders as
			may be used to identify factors	described in the "Renal
			that activate the cAMP	Disorders" section below),
			signaling pathway. CREB	diabetic neuropathy, nerve
			plays a major role in	disease and nerve damage
			adipogenesis, and is involved	(e.g., due to diabetic
			in differentiation into	neuropathy), blood vessel
			adipocytes. CRE contains the	blockage, heart disease, stroke,
			binding sequence for the	impotence (e.g., due to diabetic
			transcription factor CREB	neuropathy or blood vessel
			(CRE binding protein).	blockage), seizures, mental
			Exemplary assays for	confusion, drowsiness,
			transcription through the	nonketotic hyperglycemic-
			cAMP response element that	hyperosmolar coma,
			may be used or routinely	cardiovascular disease (e.g.,
	-		modified to test cAMP-	heart disease, atherosclerosis,
			response element activity of	microvascular disease,

	34	nolvnentides of the invention	hynertension stroke and other
	(i.)	(including antibodies and	diseases and disorders as
	<u>a</u>	agonists or antagonists of the	described in the
	ii	invention) include assays	"Cardiovascular Disorders"
	- Gi	disclosed in Berger et al., Gene	section below), dyslipidemia,
	99	66:1-10 (1998); Cullen and	endocrine disorders (as
	M	Malm, Methods in Enzymol	described in the "Endocrine
	21	216:362-368 (1992); Henthorn	Disorders" section below),
	et	et al., Proc Natl Acad Sci USA	neuropathy, vision impairment
	85	85:6342-6346 (1988); Reusch	(e.g., diabetic retinopathy and
	et	et al., Mol Cell Biol	blindness), ulcers and impaired
	20	20(3):1008-1020 (2000); and	wound healing, and infection
	K	Klemm et al., J Biol Chem	(e.g., infectious diseases and
	27	273:917-923 (1998), the	disorders as described in the
_	00	contents of each of which are	"Infectious Diseases" section
	he	herein incorporated by	below, especially of the
	l re-	reference in its entirety. Pre-	urinary tract and skin), carpal
	ad	adipocytes that may be used	tunnel syndrome and
	ac	according to these assays are	Dupuytren's contracture).
	nd	publicly available (e.g.,	Additional highly preferred
	th	through the ATCC) and/or	indications are complications
	- W	may be routinely generated.	associated with insulin
		Exemplary mouse adipocyte	resistance.
	eo	cells that may be used	
	ac	according to these assays	
	ni	include 3T3-L1 cells. 3T3-L1	
	is	is an adherent mouse	
	pr	preadipocyte cell line that is a	
	00	continuous substrain of 3T3	
	Hit	fibroblast cells developed	
	- th	through clonal isolation and	

				undergo a pre-adipocyte to adipose-like conversion under appropriate differentiation conditions known in the art.	
523	HSVBU91	1471	Activation of Hepatocyte ERK Signaling Pathway	Kinase assay. Kinase assays, for example an Elk-1 kinase assay, for ERK signal	A highly preferred embodiment of the invention includes a method for
				transduction that regulate cell proliferation or differentiation are well known in the art and	stimulating hepatocyte cell proliferation. An alternative highly preferred embodiment
				modified to assess the ability of polypeptides of the	method for inhibiting hepatocyte cell proliferation.
				invention (including antibodies and agonists or antagonists of	A highly preferred embodiment of the invention
				the invention) to promote or inhibit cell proliferation,	includes a method for stimulating hepatocyte cell
				activation, and differentiation.  Exemplary assays for ERK kinase activity that may be	differentiation. An alternative highly preferred embodiment of the invention includes a
				used or routinely modified to test ERK kinase-induced	method for inhibiting hepatocyte cell differentiation.
				activity of polypeptides of the invention (including antibodies	A highly preferred embodiment of the invention
				and agonists or antagonists of the invention) include the	includes a method for activating hepatocyte cells. An
				assays disclosed in Forrer et al., Biol Chem 379(8-9):1101-	anternative nightly preferred embodiment of the invention
	·			1110 (1998); Kyriakis JM, Biochem Soc Symp 64:29-48	includes a method for inhibiting the activation of
				(1999); Chang and Karin,	and/or inactivating hepatocyte

	Nature 410(6824):37-40	cells. Highly preferred
	(2001); and Cobb MH, Prog	indications include disorders of
	Biophys Mol Biol 71(3-4):479-	the liver and/or endocrine
	500 (1999); the contents of	disorders (e.g., as described
	each of which are herein	below under "Endocrine
	incorporated by reference in its	Disorders"). Preferred
 	entirety. Rat liver hepatoma	indications include neoplastic
-	cells that may be used	diseases (e.g., as described
	according to these assays are	below under
	publicly available (e.g.,	"Hyperproliferative
 	through the ATCC).	Disorders"), blood disorders
	Exemplary rat liver hepatoma	(e.g., as described below under
-	cells that may be used	"Immune Activity",
	according to these assays	"Cardiovascular Disorders",
 	include H4lle cells, which are	and/or "Blood-Related
	known to respond to	Disorders"), immune disorders
	glucocorticoids, insulin, or	(e.g., as described below under
	cAMP derivatives.	"Immune Activity"), neural
		disorders (e.g., as described
-		below under "Neural Activity
		and Neurological Diseases"),
_		and infection (e.g., as
		described below under
		"Infectious Disease").
		A highly preferred indication
		is diabetes mellitus. An
		additional highly preferred
		indication is a complication
		associated with diabetes (e.g.,
		diabetic retinopathy, diabetic
		nephropathy, kidney disease

(2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	(e.g., renal failure,	nephropathy and/or other	diseases and disorders as	described in the "Renal	Disorders" section below),	diabetic neuropathy, nerve	disease and nerve damage	(e.g., due to diabetic	neuropathy), blood vessel	blockage, heart disease, stroke,	impotence (e.g., due to diabetic	neuropathy or blood vessel	blockage), seizures, mental	confusion, drowsiness,	nonketotic hyperglycemic-	hyperosmolar coma,	cardiovascular disease (e.g.,	heart disease, atherosclerosis,	microvascular disease,	hypertension, stroke, and other	diseases and disorders as	described in the	"Cardiovascular Disorders"	section below), dyslipidemia,	endocrine disorders (as	described in the "Endocrine	Disorders" section below),	neuropathy, vision impairment	(e.g., diabetic retinopathy and	
																						-								_

infectious diseases and	disorders as described in the	"Infectious Diseases" section	below, especially of the	urinary tract and skin), carpal	tunnel syndrome and	Dupuytren's contracture).	An additional highly preferred	indication is obesity and/or	complications associated with	obesity. Additional highly	preferred indications include	weight loss or alternatively,	weight gain. Additional	highly preferred indications are	complications associated with	insulin resistance.	Additonal highly preferred	indications are disorders of the	musculoskeletal systems	including myopathies,	muscular dystrophy, and/or as	described herein.	Additional highly preferred	indications include, hepatitis,	jaundice, gallstones, cirrhosis	of the liver, degenerative or	necrotic liver disease,	alcoholic liver diseases,	fibrosis, liver regeneration,	metabolic disease.
																						-								

					dyslipidemia and chlolesterol
					metabolism.
					Additional highly preferred
	-				indications include neoplasms
					and cancers, such as,
					hepatocarcinomas, other liver
			-		cancers, and colon and
					pancreatic cancer. Preferred
					indications also include
					prostate, breast, lung,
					esophageal, stomach, brain,
					and urinary cancer. Other
					preferred indications include
					benign dysproliferative
					disorders and pre-neoplastic
					conditions, such as, for
					example, hyperplasia,
					metaplasia, and/or dysplasia.
	HSVBU91	1471	Insulin Secretion	Assays for measuring secretion	A highly preferred indication
523				of insulin are well-known in	is diabetes mellitus. An
				the art and may be used or	additional highly preferred
				routinely modified to assess	indication is a complication
				the ability of polypeptides of	associated with diabetes (e.g.,
				the invention (including	diabetic retinopathy, diabetic
				antibodies and agonists or	nephropathy, kidney disease
				antagonists of the invention) to	(e.g., renal failure,
				stimulate insulin secretion.	nephropathy and/or other
				For example, insulin secretion	diseases and disorders as
				is measured by FMAT using	described in the "Renal
				anti-rat insulin antibodies.	Disorders" section below),
				Insulin secretion from	diabetic neuropathy, nerve